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EDITORIAL NOTE

The African Research Journal of Education and Social Sciences (ARJESS) Volume 9, Issue 1 (2022) continues the journal's commitment to disseminating rigorous scholarly work that advances knowledge in education and the social sciences. This issue presents a collection of studies that engage with emerging questions affecting educational systems, community development, institutional performance, and broader social dynamics within the African context. The contributions reflect the importance of research-driven dialogue in shaping policies and practices that respond to contemporary societal challenges.

The articles in this issue demonstrate the diversity of perspectives and methodological approaches that characterize research in education and social sciences. Through empirical investigations conducted in different settings, the authors provide insights into institutional practices, community interactions, and socio-economic realities that influence development processes. The studies collectively underscore the value of contextualized research in understanding how social, economic, and organizational factors shape outcomes across sectors.

Several contributions also highlight the evolving nature of educational systems and the increasing need for institutions to adapt to changing social and technological environments. By examining issues related to learning processes, institutional preparedness, and organizational effectiveness, the authors contribute to the growing body of knowledge aimed at strengthening educational quality and promoting inclusive development. These insights are particularly relevant as institutions continue to respond to shifting societal demands and the lessons emerging from recent global disruptions.

The editorial team expresses sincere appreciation to the authors and reviewers whose dedication and scholarly rigor make this publication possible. Their contributions continue to strengthen the role of ARJESS as a platform for the dissemination of research that informs academic debate and supports evidence-based decision-making. It is our hope that the studies presented in this issue will stimulate further research, dialogue, and collaboration among scholars, practitioners, and policymakers committed to advancing education and social development in Africa and beyond.

Warm Regards
Karen Afandi
Editor, ARJESS Journal

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Challenges faced by Head teachers in the Implementation of School Health and Hygiene Safety Guidelines in Public Primary Schools in Muranga South Sub-County, Kenya

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Abstract: *The purpose of this study was to examine the Challenges hindering the Implementation of School Health and Hygiene Safety Guidelines in Public Primary Schools in Muranga South Sub-County, Kenya. A convergent concurrent parallel mixed methods design was adopted for this study. The target population consisted the Head teachers, District Quality Assurance Officers (DQASO) and officers in the Ministry of 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 the samples of 35 schools, 35 head teachers, 3 DQASO and 3 MPH&S officers. Questionnaires and interview guides were used to collect data. Data were then analyzed using both Quantitative and Qualitative approaches and presented in form frequency tables, percentages and excerpts from interviews. The study findings revealed that a myriad of challenges had derailed the implementation of Health and Hygiene safety in the study schools including: lack of funds, lack of trained personnel, uncooperative parents, conflicting priorities, inadequate coordination and collaboration between stakeholders and inadequate monitoring and evaluation. The study recommended that: Emphasis should be placed towards provision of adequate funds and capacity building of head teachers; that DQASO and MPH&S officers should visit the schools more frequently to guide the Head teachers on effective and efficient way to implement Health and Hygiene safety programmes. The study further recommended that the school management committee, in collaboration with Ministry of Education (MOE) should establish forums to sensitize parents on the importance of supporting health and hygiene safety programs in schools.*

Keywords: *School health and hygiene, school safety guidelines, head teachers leadership, implementation challenges in schools, public primary schools management, school health policy implementation, hygiene and sanitation in schools*

INTRODUCTION

Good health contributes to the quality of children's learning. Consequently, children must be healthy in order to fully participate in education and exploit their full potential. The issue of hygienic conditions in schools and performance of students have also been shown to be interconnected (UNICEF, 2013).This is because children spend a significant amount of time in school. According to the World Health Organization (WHO, 2009), primary schools that improve children's health also enhance the learning and educational outcomes of such children. Furthermore, good health increases enrolment and reduces absenteeism and drop-out rates bringing more of the poorest and most disadvantaged children to school (UNICEF, 2013). Poor health on the other hand is a critical underlying factor for low school enrolment, absenteeism, poor

classroom performance and early school dropout (UNESCO, 2010). Hence, School health and hygiene safety programmes constitute a critical component of school leadership function. However, it appears that in developing countries Kenya included, relatively little attention has been given towards ensuring effective implementation of these Health programmes in schools.

In Kenya, more children than ever before are attending school. This is as a result of a number of successful policy initiatives, most notably the Free Primary Education (FPE) re-introduced in the year 2003. The FPE resulted in a rapid increase in the number of children in the primary schools from 6.1 Million pupils in the year 2000 to 7.4 Million pupils in 2004 and 10.2 Million in 2013 (MOEST, 2014). Currently the primary school population is at 10.9 pupils (ROK, 2018).This rapid increase in enrolment has put pressure on the already overstretched educational infrastructure including supply of water and sanitation.The main issues include but not limited to: Inadequate safe water in schools, Lack of adequate toilets for boys and girls, gender insensitive school environments, barriers for those with special needs, lack of appropriate disposal mechanism for sanitary towels in school and lack of effective control of vectors, vermin and rodents (MOE, 2008).

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. Muranga County is among the hardest hit counties by illnesses such as diarrhea, intestinal worms, jigger infestations, upper respiratory tract infections (URTI), skin diseases, among primary school going children (MOE, 2005, MOH, 2014, MOPHS, 2013), all of which are a result of poor health and poor hygiene practices. According to Muranga County Integrated Development Plan (2018-2022), the most prevalent diseases in Muranga county that affect children between 5-13 years and which prevent children from attending school are Jigger infestation or Tungiasis (57 %), Malaria (50.5%), diarrhea and stomachache (18%), Respiratory tract infections (10.86%), and Worm infestation (36 %).All these infections are brought about by unhygienic conditions in school and at home.

Studies done in Muranga South Sub-county show high prevalence of Tungiasis (jiggers) and parasitic worm infections among school going children (Ngunjiri 2015: Mwangi, Ozwara, and Gicheru 2015: Gitahi 2016). Mwangi et al (2015) conducted a cross-sectional survey on epidemiology of *Tunga penetrans* (jiggers) in Muranga south sub-county. The prevalence of tungiasis in Muranga south sub-county was established to be at 57% in school going children between 5-12 years. The overall baseline prevalence of intestinal protozoan infections was found to be at 55.1%. This high prevalence was attributed to lack of enough water, inadequate toilets for boys and girls in schools as well unhygienic conditions in schools and at home. The results of the above studies is an indication of lack of or inadequate implementation of health and Hygiene safety programs in Muranga county primary schools and in Muranga south sub-county in particular. The purpose of this study is therefore to explore the challenges hindering the implementation of Health and Hygiene safety programmes in Muranga South sub-county.

METHODOLOGY

The study employed convergent parallel mixed methods design, in particular the parallel-databases variant. This means that the researcher collected both quantitative and qualitative data simultaneously, and then merged the two sets of data into an overall interpretation, for corroboration and validation purposes (Creswell & Clark, 2011).The study used both cross-sectional survey and phenomenology research designs. A cross-sectional survey was used to gather data from a relatively large number of cases to explore the challenges hindering 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 were all the 70 public primary schools in Muranga South-sub-county, all the 70 Head teachers, the 3 DQASO and the 3 officers from the Ministry of Water and Sanitation (Muranga South sub-county director's office, 2019). A total of 35 schools (50%) of the 70 public primary schools in Muranga South Sub-county were sampled using stratified random technique. All the 35 head teachers of the sampled schools were automatically included in the study. All the three DQASO and the two officers from the Ministry of Public Health and Sanitation (MPH&S) were purposively selected using criterion sampling.

The study made use of both questionnaires and interview guides to collect data.

Self-administered Questionnaires were used to collect information from Head teachers. Interview guides were used to collect data from Head teachers in extreme schools, DQASOs and District public health officers respective**ly.** 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 descriptive method with the help of 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 merged during data presentation.

RESULTS

 The respondents' demographic characteristics were determined in terms of gender, age, level of education, number of years in service and number of years in the current station The results are shown in Table 1.

Table 1
Demographic Characteristics of Head teachers and DQASO

No	Demographic characteristic		Head teachers(n=25)		DQASO (n=3)	
			F	%	f	%
1.	Gender	Male	12	48	2	75
		Female	13	52	1	25
2.	Age Bracket	25-30	-	-	-	0.0
		31-35	-	-	-	0.0
		36-40	1	4	-	-
		41-45	5	20	2	75
		46-50	8	32	-	0.0
		over 50	11	44	1	25
3.	Academic Qualification	Certificate	17	68	-	0.0
		Degree	5	20	3	100
		Masters	2	8	1	25
		PHD	1	4	-	0.0
4.	Years of Experience	1-4	3	12	-	0
		5-10	4	16	1	25
		11-15	6	24	2	75
		16-20	7	28	-	0
		Over 21 Years	5	20	-	0
5.	Year of experience in current school	1-4	17	68	3	100
		5-10	4	16	-	0
		11-14	3	12	-	0
		15-20	1	4	-	0
		Over 20	-	-	-	0

  Source: Field Data, 2020

Challenges Faced by Head teachers in the Implementation of School Health and Hygiene Programs in Schools

In order to explore the challenges that head teachers faced in the implementation of health and hygiene programs, the researcher sought the views of the Head teachers, District Quality Assurance and Standards Officers (DQASO) and Ministry of Public Health and Sanitation officers (MPH&S).The factors were quantified and presented in form of a table as shown in table 2.

Table 2
Challenges Faced by Head teachers in the Implementation of School Health Programs in Schools

Challenge	Head teachers		QASO		MPH&S	
	f	%	f	%	f	%
Lack of funds	25	100	3	100	2	100
Lack of Training/expertise	18	75	3	100	2	100
Uncooperative parents	25	100	0	0	0	0
Inadequate coordination	16	65	1	50	1	50
Low Priority	25	100	3	100	2	100
Lack of Timeline	13	50	3	100	1	50
Lack of political good will	6	25	0	0	0	0

Source: Field Data, 2020

Lack of Funds
From table 1, lack of funds manifested as the major challenge thwarting the efforts of head teachers in the implementation of health and hygiene safety programs in schools. All the key informants cited lack of funds as the major challenge to the implementation of the Health and Hygiene safety guidelines. The head teachers indicated that implementation of health and hygiene program is a costly endeavor since it involves renovation and construction of sanitation facilities, sickbays and purchase of costly equipment such as water tanks, hand washing facilities and even first aid kits and drugs. One head teacher said:

> There is lack of funds for the implementation of the school health program; to stock the first aid box requires funding and also to provide descent latrines, enough water and hand washing facilities for all the pupils in the schools. All these things require money which we do not have. There is no specific fund set aside for the implementation of the school health program by the government. The ministry of Education only gives out funds for general maintenance of school facilities such as maintenance of the school buildings and for buying stationeries. There is no specific fund for the implementation of the school health program (Head teacher 3, interview January 20, 2020).

Some of the head teachers lamented that when health and hygiene guidelines were delivered, they were not accompanied by a fund for its implementation. However, some parents were helping where they could. Another Head teacher reported the following:

> There is no specific fund for the implementation of the school health program. However, the Ministry of Education gives out funds for general maintenance of school buildings such as repair of damaged windows and doors of the classrooms and buying of stationeries which is barely enough. There is no special fund set aside for the implementation of the school health program by the government. Some parents have been assisting in the implementation of the program. For instance, one of the parents donated the drugs we have in the first aid box that we are now using (Head teacher 1, interview January 20, 2020)

Lack of Trained Personnel

This study further showed that lack of trained human resource to implement Health and hygiene safety programs in the schools was another key impediment. The challenge of lack of expertise was mentioned 75% of the head teachers and 100 % of QASO. A few of the head teachers were not even aware of such training programs on School Health activities: In addition, the training only emphasized   on how to prevent and deal with fire outbreaks in schools.   On the same challenge, another head teacher observed the following:

> …you see, we were trained just once…during the time when students were really burning schools.., so the training was mainly on how to deal with fires, not much of health and hygiene safety was mentioned (Head teacher 4, interview February 20, 2020)

Moreover, a few of the head teachers identified the turnover of trained staff as a challenge. They felt that as soon as they completed training such teachers were transferred to other institutions, mainly institutions of higher learning leaving the school with no one to continue with health and hygiene activities. One head teacher lamented saying:

> In this school, we do not have teachers with enough knowledge about health issues. we used to have one teacher who was trained in matters of health… in fact she used to teach health education, she was also the patron of health club in the school, but barely one year into her training, she went for maternity leave, after the leave she was taken away to another institution… so for now we have no one with that knowledge, the pupils just manage on their own (Head teacher, interview January 20, 2020).

Uncooperative Parents

Uncooperative parents was identified as a challenge by all the head teachers. The head teachers reported that they were dealing with very uncooperative parents who are not willing to support the schools in any way. Some head teachers felt that the word 'free education' was confusing most parents since they feel that they are not supposed to contribute anything for their children's education. One head teacher felt that Parents were more of a problem than the children and that there was a need to sensitize the parents on the importance of supporting health programs in schools. They felt that there was a need for the MOE to educate the parents and get through to

them because they seem to be a barrier. However, some head teachers attributed lack of cooperation by parents to high level of poverty among the parents in the region. One head teacher reported the following:

> Most parents in this area are very poor. You know this the driest area in the whole of Murang'a County and there is no cash crop so parents are very poor, some do not even have enough food to eat …so how can they support school projects when they themselves need to be supported? (Head teacher4, interview, 19 February, 2020)

Another head teacher also noted and explained the following:

> …Well, to me, I think the level of poverty in this area really makes it difficult for the parents to contribute financially to the implementation of school projects including HealthPrograms. So I think support should come from other sources to ensure there is implementation and sustainability of the projects. However, we still needto sensitize the parents and the community in the near future to fully support and own the school health projects and contribute whatever they have to support some of the health activities (Head teacher 1, interview 20 January, 2020)

However, QASO were of the opinion that headteachers were reluctant to involve parents in school activities due to the fact that most parents in the area are illiterate. One of them said.

> ….you see the head teachers are to blame …..They are not keen to involve parents and the community members because they consider them illiterate….. Its true most of them have not gone to school, but I think they can still contribute something to the school.

Low Priority

Another major challenge highlighted by 70% of the heads teachers was that the immediate government priority for schools was to improve the academic performance of the pupils hence; academic achievement has been dictated as the school's main priority and not the health of the pupils. Head teachers felt that they are predominantly assessed on academic achievement and not on health of the child. So time spent on health activities reduced valuable curriculum time, leaving teachers feeling overburdened. One Head teacher lamented saying that:

> Our work is not to deal with the health of the pupils…you see when the inspectors come they will not ask me how many pupils got sick and were treated in the school. They are concerned with the academic performance of the pupils, so they will ask for lesson plans, schemes of work and progressive results of the pupils. So teachers spend most of their time making these things rather than being concerned about the health of the learners (Head teacher 2, February 1, 2020)

Another head teacher said;

> When pupils are sick we just send them back home to the parents, we do not have time to attend to them because we do not even have a sick bay nor do we have any health personnel who can deal with issues of sickness. We concentrate on teaching because that is our core business and that is what we are assessed on. The government and the parents just want to know how many pupils managed to attain 400 marks and above in KCPE. If we do not perform well academically even the parents and the local community will come and chase us from here. So because of that pressure you find that even the PE lesson which could improve the health of

the pupils is usually used to teach mathematics or any other theory lesson (Head teacher 3, interview 20 February, 2020)

Inadequate Coordination and Collaboration between Stakeholders

Inadequate coordination and collaboration among key stakeholders was also cited as an impediment. Some head teachers admitted to experiencing some difficulties with coordination amongStakeholders. Seventy five (75 %) of the head teachers felt that though a certain level of coordination existed between the stakeholders, it was not adequate especially between the MOE and MOH. One head teacher said:

> I don't see that extent of coordination even between MOE and MOH. For example when you go to the clinic for Deworming drugs… you find there is no one assigned that duty to authorize such drugs for school children, so it becomes very frustrating. Sometimes we just have to rely on well-wishers for such drugs. So I think there is a weakness in that area, which can be a challenge for the sustainability of the program(Head teacher 2, interview 20 February, 2020)

Lack of Political Goodwill

Nearly a half (45%) of sampled head teachers cited lack of political good will as a challenge influencing the health and hygiene safety policy implementation process. The study established that political goodwill was realized in the provision of school infrastructure as well as WASH facilities.

One head teacher said:

> This school has not received any help from CDF. I have applied several times for CDF fund without any success. For example one of our ablution blocks sank last year during the heavy rains; I went personally to the area MP for help...he agreed to help, it is three months now and I have not received any feedback. I think I will tell the parents to help because the children are really suffering (Head teacher 2, interview 20 February, 2020)

Inadequate Monitoring and Evaluation/Inspection

Slightly more than a third (38%) of the sampled head teachers cited irregular inspection by DQASO as an impediment. They stated that monitoring and evaluation was rarely done and where it was done, feedback was never given or was delayed. Therefore, the results were rarely used to improve WASH situation in schools. However, QASO highlighted the challenges they faced in carrying out their duties including lack of transport and inadequate staff. Lack of regular inspection was also attributed to the fact that schools are dispersed throughout the study area, with sparse distribution in the remote hilly terrain, therefore making accessibility a problem. Inadequate time to conduct inspections, compile reports and perform other duties was also cited by QASO as impediments to their effective work. Moreover, QASO also blamed head teachers saying that most of them were uncooperative and failed to follow Health and hygiene safety instructions as given by the ministry of education.

DISCUSSIONS

This study has examined the challenges faced by the Head teachers in the implementation of Health and Hygiene safety guidelines in public primary schools in Muranga south sub-county, Kenya. With reference to lack of funds, the study findings appeared to be in consistent with a study done by Christian et al (2015), in Swansea region of United Kingdom. The study revealed that although funding for implementation of school health programs was available, it was limited and restrictive. Hence, head teachers often opted for free activities from parents and well-wishers rather than those needing investment by the school.

Further, the study findings appear to be in line with that conducted by Omolo and Samatwa (2010) in Kisumu County, Kenya. The study found out that inadequate funds were by far the most significant factor hindering the implementation of safety policies in schools. A majority of head teachers (86.67%) and QASOs (100%) stated that inadequate funds were a major hindrance to implementation of safety program in schools. In the same line, Barasa (2016) identified inadequate funds to be the greatest challenge hindering the implementation of sanitation and Hygiene guidelines in Kakamega municipality public primary schools, Kenya. Head teachers stated that they could not implement health and hygiene measures fully due to lack of funds. It is therefore clear that financial resources are important in providing good quality WASH facilities, health education and medical services to learners. Schools must have financial means to keep WASH facilities clean, hygienic and well maintained.

Regarding Lack of Training/expertise, the head teachers felt that they lacked the necessary expertise in the whole area of health and hygiene safety implementation due to lack of training on health related issues. The study further established that although some Head teachers had been trained in safety policy matters, this was inadequate since it was done only once with no further reinforcement. Besides, according to the head teachers, only one teacher in each school was trained on the issue of school safety. This finding is similar to the findings of a study by Saito et al (2014) from the Lao PDR where head teachers complained about the high turnover of the trained staff that had affected the implementation of health programs. The head teachers felt that the loss of a key staff created a significant blow to a safe school program. Similarly, in a study conducted by Migiro (2012) in Borabu District, Nyamira County public secondary schools, (78%) of the Head teachers cited lack of knowledge in health matters as a factor hindering the implementation of safety policies. They felt that too few teachers and school personnel were educated and trained in the broad concepts of school health programs and had the skills to implement them. They stated that Knowledge in administration of deworming drugs and performance of first aid   is necessary for successful use of such materials and equipment. However, such knowledge was inadequate among school community members. It was further established that though some Head teachers were trained in safety policy matters there was however a gap between theory and practice due to lack of facilities which negatively influenced successful implementation. Knowledge in health and hygiene safety is a critical factor for successful implementation of health and hygiene safety policy.

With reference to uncooperative parents the finding appear to be in line with a study by Clelland, Cushman and Hawkins, (2013) in New Zealand. The study indicated that the challenge of brining the parents on board truly existed, particularly the issue of whose role it is to educate parents so that they are equipped to be able to support their children in learning about health. Teachers consider learners' educational outcomes as their primary responsibility therefore, educating parents is seen to be beyond the scope of school function (Clelland et al. 2013). The CDC (2014) suggests that there is a need for collaboration between the parents or families of the learners and community within which the schools are located in order to align resources in the support of the whole child. According to the research findings, some head teachers attributed lack of cooperation by parents to high level of poverty among the parents in the region.

The views of the head teachers in this study appear to contradict those of the QASO officials who were of the opinion that head teachers were reluctant to involve parents in school activities due to the fact that most parents in the area are illiterate. This argument is similar to a study by Akumu and Onono (2017) in Kajiado County, where respondents felt that the high level of illiteracy among members of the surrounding community was to blame for lack of involvement. In addition, the respondents stated that poverty played a key role in limiting participation of the community, in such a way that they could not be in a position to contribute funds towards the project. However, according to UNICEF (2012) contribution of parents and community members is not just financial. Parents and community members can provide unskilled labour and local construction materials to build school facilities. Involving them in planning can lead to a sense of ownership among the parents and community members. In addition, parents and community members can have important roles in keeping the school clean, safe and healthy, and encouraging children to adopt improved hygienic behaviour.

This study also identified lack of a coordinated approach as a key challenge to the implementation of health and hygiene safety in schools. This finding is consistent to Christian et al (2015) that lack of a coordinated approach was a key challenge to effective implementation of health programs in Swansea region of United Kingdom. Similarly, in a study done in Lao PDR by Saito et al (2014), some of the key informants mentioned that Ministry of Health was more active in school health issues compared to the Ministry of Education. Furthermore, the overall coordination between the two sectors was limited, which therefore led to a lack of planning for the sustainability and scaling up of the program. Most of the organization and ongoing WASH activities came from the health sector and from a few NGOs working in the education sector. Because health and education are closely linked, progress can only occur if the ministries of health and the ministry education, as well as their representatives at the county and sub-county levels collaborate. However, according to (UNICEF 2014), even this is not enough, as too often these are the least well-funded and well-staffed ministries. Furthermore, the ministries of water and irrigation, Public health and sanitation as well as other organizations like churches have interests and responsibilities that can affect school health programs if not well coordinated. When implemented and coordinated well, an effective school health program can provide a strong foundation from which to build a health-promoting school where learners are healthy and learn healthful behavior (UNICEF, 2014).

CONCLUSION

The research identified the major challenges faced by Head teachers in the implementation of school health and hygiene safety guidelines in public primary schools in Muranga South Sub-County to be the following: lack of funds, lack of expertise, uncooperative parents, low priority, inadequate monitoring and evaluation, inadequate coordination and collaboration between stakeholders. Based on the research findings, the researcher made the following recommendations: That emphasis should be placed towards provision of adequate funds and capacity building of head teachers and teachers, that District Quality Assurance Officers and officers from the Ministry of water and Sanitation should visit the schools more regularly 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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Examining the Adjustment of the Use of Modern Technology by Theological Education by Extension in Administering Programs in Africa Gospel Church in Kericho County, Kenya

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Abstract: *the purpose of this study was to examine how Theological Education by Extension (TEE) has adjusted to the use of modern technology in administering programs in Africa Gospel Church (AGC) in Kericho County, Kenya. The study adopted cross-sectional survey research design. The study targeted approximately 40,000 people in Kericho County. The targeted population included TEE Instructors, local pastors and former TEE students and current TEE students. In this study, both purposive sampling and simple random sampling techniques were used to arrive at a study sample size of 250 respondents. Questionnaires were used by the study in data collection. Data was analyzed as per the research questions and objectives. Data was summarized in tables, frequencies and percentages. The statistical package of social sciences (SPSS) was used to aid in the analysis. The study findings revealed that Theological Education by Extension has failed to adjust to the use of Modern Technology in administering Programs in Africa Gospel Church in Kericho County. This could be attributed to the fact that the TEE trainees rarely use a computer for their teaching, learning or accessing materials. There are no materials in soft copy format or digital content whatsoever. Most TEE students are computer inefficient. This is because most of the current TEE students are from the rural areas as well as their level of education may not have allowed or exposed them to the opportunity to receive computer training. Most of the learners represent the older generation – over 40 years of age and thus most of them may have begun their programs before the technological revolution. The study therefore recommended that more resources need to be put towards making TEE more viable and a model that ministers effectively to the 21st century context*

Keywords: *computer training, theological education by extension, theological education, theological education adjustment, theological education programs, administering theological programs, use of modern technology in education*

INTRODUCTION

Theological Education by Extension was started in 1963 by the Evangelical Presbyterian Seminary of Guatemala in South America. The seminary was trying to find a solution to train many ministers on different aspects of ministry. They therefore piloted a program in which the school would go to the student and not the student going to the school as had been the case. This model allowed the students to study within their locality and therefore serve their people effectively. Theological education by extension programme is taking the educational programme out to where the people

live, instead of the students leaving home and becoming boarding students at one of our educational facilities (Stanton, 2012)

Information Technology has brought about global appreciation and a rethink of old skills, tools and values. Appropriate technology informed by the entire needs of the students and the objective of theological education are being ascertained and adopted. With IT, theological educators and students can improve their research skills. In theological education, IT helps in several ways. It enhances student achievement, distance theological education, learning productivity, integrated learning systems, use of communication technologies and computer based management information systems (Oladejo, 2005).

The whole world has been undergoing a technological revolution that does not only affect the business world but also informs the direction the church has to adopt if it is to remain relevant and effective in its programs. According to Stanton, (2012), Nothing has a more profound impact on the patterns of education globally then the rapid transformation processes going on with regard to new information and communication technologies (ICT) which are both opening up new potentials in theological learning (e-learning, research exchange groups via internet, distant master courses using digital formats; digital libraries) as well as creating new problems and discrepancies. Further, Stanton states that, projections of educational goals into the future involve a great deal of risk. We can plan, but cannot always dictate the shape that education will assume. We do not yet know how technology will change educational delivery systems, what learners will expect of their educational experience, and what they will be willing to pay for an education in a private religious college. Will students be satisfied with technical training, or will they demand a rich Christian liberal arts education? Technology has indeed changed the delivery systems in the educational sector.

These new technologies increasingly continue to challenge the traditional processes of teaching and learning as well as the way education is managed. Although IT is an important area of study in its own right, it exerts major impacts on virtually all curriculum areas. It provides instant access to immense collection of data, challenging assimilation and appraisal skills. Rapid communication, plus increased access to IT could translate learning into a really enduring activity in which the pace of technological change forces constant evaluation of the learning process itself. Learners can study what they want, when they want, where they want and at whatever age they may wish to do so. ODL systems typically use technology to mediate learning; for example, printed study materials, audio, computers, TV, mobile and wire telephones and the web. ODL can give learners' access to education that they would not otherwise have had for various reasons (Ministry of education 2012).

Invariably, the impact of IT is now being felt on theological education. It possesses the prospect of altering the way in which theological communication is done, employed and deployed. The conventional image of theological education as a self-enclosed community is speedily becoming impracticable as knowledge becomes extensively accessible on the Internet, and teachinglearning is no longer bound by space restrictions (Oladejo, 2005). According to Wanzala (2014), the government of Kenya acknowledges that:

> ICT is a major vehicle for teaching and learning from the earliest years. It is at a very young age that learners begin to acquire digital skills which they increasingly use to explore and exploit the world of information and to craft that into knowledge. ICT facilitates the opportunity for more student centered teaching, more self-learning and more peer teaching. It also provides greater opportunity for teacher-to-teacher, and student-to-student communication and collaboration and access to the worldwide web and the learning resources contained thereon.

A considerable proportion of institutions have focused on encouraging, applying, synchronizing and smoothing the progress of the use of information and communication technologies (ICTs) to enhance teaching, training and student learning capabilities, particularly in satellite campuses and colleges (Soliman et al, 2015).

There is tremendous growth and diversity in Open and Distance Education—in the number and types of individuals' learning outside traditional classrooms, in the variety of providers, and in the range and effectiveness of new technologies serving as delivery tools for learning. The traditional delivery and administration of theological education must take up the challenge and respond effectively to the accompanying changes concomitant with the Information Technological age or it might have to confront the crisis of redundancy (Oladejo & Akanbi, 2012). Historically, its predominant medium of instruction has been printed materials, however, it may incorporate or make use of many other instructional materials such as, videotapes, CD or

DVD ROM's, audio recordings, facsimiles, telephone communications, e-mail, and Web-based delivery systems through the Internet(Stanton, 2012). Therefore, this paper intended to examine how theological education by extension has adjusted to the use of modern technology in aministering programs in Africa gospel church in Kericho County, Kenya.

The adjustment of the use of modern technology by Theological Education by Extension in administering programs in Africa Gospel Church in Kericho County, Kenya

METHODOLOGY

Cross-sectional survey was used in this research because it was concerned with describing, recording, analyzing, and reporting conditions that exist or existed (Kothari, 2004). The survey described the status of TEE and examined the impact of this type of education. This method is suitable because it helped in gathering information about people's attitudes, opinions and habits. The design allowed the researcher to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2005).

AGC, K has close to 400 churches in Kericho Region. The target population for this study was 40,000 church members, lay leaders, pastors, TEE students and Instructors. The estimated population was arrived at by averaging 100 members for each of the 400 congregations. The corresponding area TEE Instructors, local pastors and former TEE students and current TEE students were contacted by the researcher as co-researchers and committee members for the

purpose of helping with the discussion and implementation of the research results. They were selected because they are co-ordinating, directing, and/or are currently involved in the TEE Program in their respective Areas.

Both purposive sampling and simple random sampling techniques were used in this study. The purposive sampling technique was used in this research because the researcher critically thought about the parameters of the population to be considered and the simple random sampling of the respondents would be crucial to the success of the research, in that the selection was representative. The sample size for the study was calculated using the formula by Slovin, 2015:

$$n = \frac{N}{1 + Ne^2}$$

Where n = is the size of Sample

N is the population of the sample

e^2 is probability of error

Therefore the Sample size will be: n = $\frac{5000}{1 + 5000(0.05)2}$

n = 250 respondents

The sample size comprised of 50 TEE instructors, 50 pastors, 100 TEE students and 50 church leaders. The total number of the sample size was 250 respondents.

Questionnaires were the major data collection instruments used by the study. The research employed open-ended questionnaires that were prepared and administered to the respondents. Questionnaires were relevant to this study because they are less expensive, they are free from bias, and the results generated are more reliable and dependable (Kothari, 2004).

Validity is the degree to which a test measures what it is supposed to measure. The validity of a research instrument concerns the extent to which the instrument yields the same results on repeated trials. Before the actual study, pretesting of the instruments was carried out in one of the TEE centers. This helped to determine the reliability, which is a measure of the degree to which a research instrument yields consistent results or is influenced by random error, which is the deviation from a true measurement. The researcher undertook pre-tests data collection before the actual study schedules. This ensured that discussion procedures would obtain the data required to meet the objectives of the study thus enhancing reliability and validity of the data collected. Data collected during pre-testing is essential in adjusting the research instrument A. Mugenda and O. Mugenda (2003)

After data had been collected the researcher documented the findings as explicitly as possible. The data from questionnaires were all listed. A table with rows and columns was developed to take responses for all the questioned asked in the questionnaires in line with the summated scales. After the transcript of the data was prepared, the researcher wrote comments on the statements being the first interpretation of the data. If certain issues seemed to be still unclear or controversial, the researcher formulated additional questions and included them in the next questionnaires conducted in this research. Data was analyzed as per the research questions and objectives. Data was summarized in tables, frequencies and percentages. The statistical package of social sciences (SPSS) was used to aid in the analysis.

RESULTS

Background Characteristics of the Respondents

The demographic characteristics included are; gender, age, level of education, occupation and duration of membership.

Slightly more than a half (56%) of the respondents was men while 44% were females.

Regarding the age bracket, the results shows that the respondents aged between18-39 years represented 20% of all respondents while those aged over 40 were 80%.

With reference to the educational level, 8% of the total respondents had no formal education, 24% had primary education, 40% had secondary education, 20% had tertiary education, 15% had university education and 2% had either Masters or PhD. This means that 32% of the respondents had not attained education beyond primary school level, while only 68% of the respondents had gone beyond secondary school education.

About their occupation, 20% were TEE instructors, 20% were Pastors, 40% were TEE students and 20% were church leaders in different Churches.
With reference to the duration in which the respondents had attended AGC membership, less than 1 years were 2%, between 1-5 years were 8%, those who had attended the church between 5-10 years were 32% and those who had attended the church for over 10 years were 58%.

Examining the Adjustment of the Use of Modern Technology by Theological Education by Extension in Aministering Programs in Africa Gospel Church

The study sought to examine the Adjustment of the Use of Modern Technology by Theological Education by Extension in Aministering Programs in Africa Gospel Church. Table 1 shows the distribution of the respondents

Table 1
Adjustment of the Use of Modern Technology by Theological Education by Extension in Aministering Programs in Africa Gospel Church

Statement	SA		A		U		D		SD	
	F	%	f	%	f	%	f	%	F	%
TEE in AGC, K Has Used Modern Technology in administering its Programs	20	8	30	12	20	8	100	40	80	32
One Can Easily Access TEE Materials through the Use of Computers	16	6	6	5	5	2	120	48	87	35
TEE Utilizes the Use of CDs/DVDs/Tapes/and Other Audio Visual Aid	10	4	10	4	3	12	115	46	112	44.8
TEE students should be taught how to use computers	110	44	93	37.2	8	3.2	25	10	16	6.4
TEE Should Embrace Online/Digital Learning in Order to Train Church Workers	125	50	100	40	5	2	10	4	10	4
TEE Training Centres Are Equipped with Modern Technology (Projectors, Computers, etc.)	16	6.4	10	4	5	2	120	48	100	40

Table 1 reveals that according to this study majority of the respondents (62%) disagreed with the idea that most of TEE trained pastors know how to use a computer, only 20% of them agreed with the statement.

An overwhelming majority (83%) of the respondents disagreed with the fact that one can easily access TEE materials through the use of Computers, 11% of the respondents supported this idea while 2% remained undecided on this idea.

The respondents were asked whether TEE utilizes the Use of CDs/DVDs/Tapes/ and other audio visual aids and 91 % of the respondents disagreed while 8% of the respondents agreed with the fact under study.

On whether the students should be taught how to use computers, an overwhelming majority (83%) of the respondents agreed with the statement, only 16% of them disagreed with the statement.

On whether TEE should embrace Online/Digital Learning in order to train church workers, 90% of the respondents supported the idea. Only 9% of the respondents were not for this idea while 1% was neutral on this idea.

Regarding the statement, TEE training centres are equipped with modern technology (Projectors, Computers, etc.), 88 % of the respondents did not agree while 10% of the respondents indicated that they are.

Rating the Use of Modern Technology in Administering TEE

The study sought to rate the use of technology in administering TEE. Figure 1 shows the distribution of the respondents by Rating the Use of Modern Technology in Administering TEE
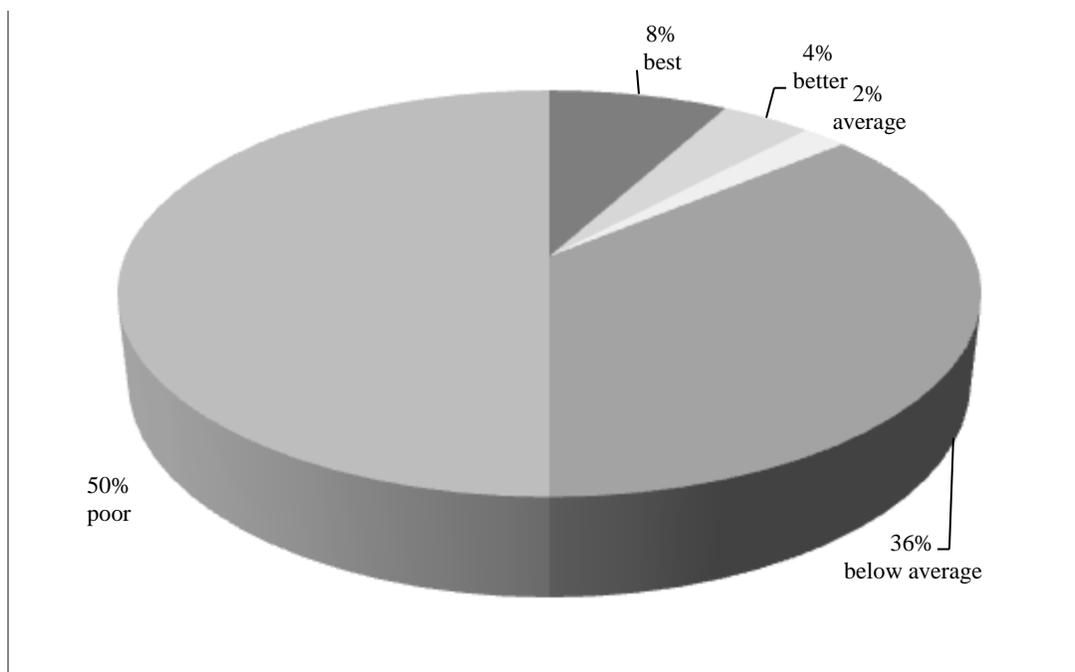

Figure 1 Rating the Use of Modern Technology in Administering TEE

The respondents were asked to rate the use of modern technology in administering TEE and their response were as follows: Those who rated it best were 8%, those who rated it better were 4%, those who rated it average were 2%, those who rated it below average were 36% and those who rated it poor were 50%. This can be attributed to the fact that TEE does not utilize modern technology in its teachings.

DISCUSSION

This study was interested in establishing how TEE in AGC, K has adjusted to the use of modern technology in administering their programs. The respondents were asked whether most of TEE trained pastors know how to use a computer and 72% of the respondents disagreed with this fact under study while 20% disagreed. This is contrary to the study by World Conference (2009) which noted that nothing has a more profound impact on the patterns of education globally than the rapid transformation processes going on with regard to new information and communication technologies (ICT) which are both opening up new potentials in theological learning (e-learning, research exchange groups via internet, distant master courses using digital formats; digital libraries) as well as creating new problems and discrepancies. This is attributed to the fact that majority of the trainees are from rural areas where they feel that there is no need of knowing how to use a computer. Also, the level of education and the age of TEE students is a contributing factor.

According to this study still 83% of the respondents disagreed with the idea that one can easily access TEE materials through the use of Computers while 11% of the respondents were not for this idea. These results might have been due to the fact that the trainers have not mind utilizing computers because they believe in training their students face to face. Also the trainers are and the trainees meet more often and thus they have not thought much about putting the materials in a computer. This is contrary to what Oladejo (2005) noted that Appropriate technology informed by the entire needs of the students and the objective of theological education are being ascertained and adopted. With IT, theological educators and students can improve their research skills.

Majority of the respondents (91%) further refuted the fact that the idea TEE utilizes the Use of CDs/DVDs/Tapes/and other audio visual aids while 8% of the respondents supported this idea. This response might be as a result of the fact that TEE has not adapted to technology and thus not using computer related technology. These results mean that the church has not adopted technology in teaching its students.

The respondents were asked whether TEE students should be taught on how to use computers and 83% of the respondents agreed with this fact while 14% of the respondents disagreed. This can be attributed to the fact that things are changing and the respondents feel that there is a need for TEE to adapt to the use of modern technology by having the students and instructors being trained on how to use a computer. This also can be attributed to the fact that as the TEE students interact with others theological students then they feel that they need to be at par with their fellow learners and thus then need to learn how to use computer. This corresponds with observations by the World Council of Churches which noted that, ―Nothing has a more profound impact on the patterns of education globally then the rapid transformation processes going on with regard to new information and communication technologies (ICT) which are both opening up new potentials in theological learning (e-learning, research exchange groups via internet, distant master courses using digital formats; digital libraries) (Werner, 2014). As had been highlighted in this research, as the Kenyan population providing labor force increases in size, structure, diversity and

complexity, its educational provision to improve skills, competences and proficiency demands that knowledge delivery must extend beyond the habit of continuous contact with the instructor from enrolment time of anyone given course up to the time a candidate sits for a final examination.

It is evident from this study that the respondents were of the idea that TEE students should embrace online/digital learning to train church workers. This is because majority 90% of the respondents attested to this fact while 8% refuted this fact. This conclusion might be as a result of the fact that currently the use of information technology is inevitable and that is why the TEE students need to adapt to the emerging trends of learning and technology. This is an indication that the TEE students are recognizing the need to embrace technology because majority of those they are serving are utilizing it. This notion is in line with what Oladejo (2012) who noted elsewhere in this study that, it may be difficult to avoid probable criticisms of distance education in regards to its effectiveness or otherwise in theological education. Yet, its current reality and possible usefulness cannot be denied or overlooked.

The findings of this study generally reveal that TEE training centres are not equipped with modern technology (Projectors, Computers, etc.). To refute this fact 88% of all the respondents were negative about the issue under study while a handful of 10% supported it. This supports the observations by Oladejo (2012), which noted that, theological education is viewed as ministrycentered with the aim of developing leadership skills. They are invariably built on the idea that ministerial learning is more effective when based at the very place of use.

The respondents were asked to rate the use of modern technology in administering TEE and 86% of the respondents rated it below average while 14% of the respondents rated it above average. This can be attributed to the fact that the TEE trainings rarely utilize technology in their training. This also can be attributed to the fact that still majority of the TEE students are mainly in rural areas where they cannot access internet services. Further majority of TEE students don't seems to matter in adapting to the use of modern technology.

CONCLUSION

The study concluded that Theological Education by Extension has failed to adjust to the use of Modern Technology in administering Programs in Africa Gospel Church in Kericho County. This can be attributed to the fact that the TEE trainees rarely use a computer for their teaching, learning or accessing materials. There are no materials in soft copy format or digital content whatsoever. Most TEE students are computer inefficient. This is because most of the current TEE students are from the rural areas as well as their level of education may not have allowed or exposed them to the opportunity to receive computer training. Most of the learners represent the older generation – over 40 years of age and thus most of them may have begun their programs before the technological revolution. The study therefore provided the following recommendations: more resources need to be put towards making TEE more viable and a model that ministers effectively to the 21st century context; distance learning must be recommended as a necessary delivery system for education for many institutions and individuals in Kenya and all over the world. AGC, K needs to put lots of

effort in strengthening TEE as a very important institution for training its workers; the church may also need to sponsor more young people to study through TEE to help change their perspective towards TEE

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Effect of Organizational Justice on Counterproductive Work Behavior among Employees in Public Universities in Western Region, Kenya

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Abstract

Organizations the world over depend on factors such as human capital, good human resource management practices, and good behavior and attitude from employees to achieve their objectives. However, certain factors within many modern organizations make the organizational environment susceptible to negative employee behavior. The objective of this study was to establish the effect of organizational justice on counterproductive work behavior (CWB) among employees in public universities in the Western region of Kenya. The study adopted the explanatory research design. Stratified sampling was used to select the universities, while simple random sampling was used to select individuals from each cluster. The sample population was 506, selected from a target population of 4,476 academic and non-academic staff. Data was collected using questionnaires and analyzed using Statistical Package for Social Scientists (SPSS) version 25. Cronbach alpha coefficient was >0.9. The study found that organizational justice had a significant effect on work behavior with $r=-.576^{**}$. The study recommends that public universities formulate and promote policies focusing on the improvement of organizational justice, to help in reducing negative employee work behavior.

Keywords: counterproductive work behavior, organizational justice, distributive justice, interactional justice, procedural justice

1. Introduction

Bad behavior at the place of work is not new. From the beginning of the Industrial Revolution to date, employers have had to contend with behavior from employees that damage organizational well-being (Klotz & Buckley, 2013) with employees acting in ways that hurt their coworkers or their organizations (Coye, Murphy & Spencer, 2010). As more contemporary and complex forms of organizations emerged, early management scholars and consultants also began to document and contend, more properly and systematically, with workers behaving poorly in this new environment (Klotz & Buckley, 2013). According to Everton, Mastrangelo & Jolton, (2005), with the introduction of the desktop personal computer and the internet, the chance for employees behaving badly is now exactly at their fingertips if they so choose (i.e., personal email, online banking, downloading pornography).

Counterproductive work behavior (CWB) is any deliberate behavior on the part of an organization's member and which the organization views as different from its legal interests (Gruys & Sackett, 2003). It is voluntary behavior that contravenes or goes against the significant organizational norms, and in so doing, threatens the interests of both the organization and its members (Saeed, Mizna, Lodhi, Gill, Amin, & Iqbal, 2014). It is generally a very pervasive and expensive problem to organizations, and cuts across different industries and countries (Bennett & Robinson, 2000). CWB is responsible for giving an organization a negative image to both its external and internal stakeholders, and this situation becomes even worse when the recent economic scandals that hit the western markets are considered (Levine, 2010).

According to Biron (2010) CWB have premises in organizational typology, which is related to the organization itself. Fox, Spector and Miles (2001) for instance, suggests that certain organizational factors make the organizational environment more vulnerable and prone to counterproductive work behavior. An example includes organization justice, which is a worker's individual assessment and/or opinion of the ethical and moral standing of the way in which its managers act (Kasemsap, 2017). Employees' attitudes linked to the procedures, dealings and choices of the organization acts as a base for organizational justice. Organizational justice can be distributive, procedural and interactional (Shan, Ishaq & Shaheen, 2015). Distributive justice is underpinned in the equity theory meaning that employees compare their input ratio with the output ratio and if there is any discrepancy, they feel unjust. Procedural justice is concerned with the fairness of the process involved in the allocation of the outputs, together with perceptions of fair treatment of all employees without bias. Interactional justice on the other hand is concerned with the level of fairness of treatment in the course of the social exchange process (Shan, et al. 2015). It has been recognized that when workers perceive fairness from the organization, they labor with more commitment and effort (Kasemsap, 2017) as a way of reciprocating the fair treatment they receive from the organization (Thornton and Rupp, 2016), thus avoiding CWB.

Justice within an organization could be determined by many factors, for instance, organizational leadership (Campbell, White & Durant, 2007). The whole organizational structure, including things like pay system, behavior of colleagues, also determine organizational justice (Mayer, Nishii, Schneider & Goldstein, 2007). The idea behind organizational justice is the fact that employees are actually active observers, who see how rewards and punishment in organizations are allocated. According to Colquitt (2001), such allocations may seem fair or unfair based on (i) distributive justice - whether one deserves what they received, for example decisions about promotions, separation, training, and transfers (Everton, Jolton & Mastrangelo, 2007); (ii) procedural justice - whether the process of allocation was fair, for example discrimination and work relations (Roberson & Stevens, 2005); and (iii) interactional justice - whether one was treated respectfully and with dignity.

According to Aguilera, Rupp, Williams and Ganapathi (2007), employee's perceived justice at work has a powerful effect on his well-being in addition to the organizational outcomes like employee turnover, performance, etc. Also, if employees perceive they are undervalued by their organization and are not being supported, they might not build strong psychological ties with their colleagues and the organization (Cheung & Law, 2008). Research by Nasir and Bashir (2012) indicates a considerably positive link connecting organizational justice and workplace deviance,

with employees involving themselves in deviant acts such as intentionally coming late to work, gossiping about the managers, intentionally ignoring supervisors' instructions, etc. Deviance at work comes about in response to unequal treatment at the workplace. These claims are supported by equity theory which hypothesizes that workers compare their portion of outcomes (pay, promotions, raises) to inputs (education, training, skill and effort) (Henle, 2005). When employees get the same outcome from the same input as compared with other coworkers, they experience equity. Similarly, when there is an inconsistency between what they put in and the output share as compared with others, they will experience inequity. To restore their sense of equity, therefore, they will often resort to acts of deviance (Henle, 2005). Injustice is known to be detrimental to organizations, a corrosive solvent with the capability of dissolving bonds within organization, hurting individual employees, while harming the organization wholly (Cropanzano, Bowen & Gillilang, 2007).

It is therefore, in the best interest of organizations to treat their workers well, since it is not only good marketing for investors, customers and future employees, but also helps to reduce the likelihood that current employees will engage in counterproductive behavior (Everton *et al*, 2007). An environment which has equitable and fair outcome distributions, fair procedures, where employees are treated respectfully will have improved perceptions of justice (Galperin, 2002), which will probably lead to less CWB. Given this background, the study sought to examine the effect of organizational justice on counterproductive work behavior among employees in public universities in Western Region in Kenya.

2. Methodology

This study used explanatory research design which is appropriate for studies that try to find an underlying relationship linking variables, enables generalization from a small section to a whole populace in order that deductions concerning some attributes, of that particular population can be made (Saunders, Saunders, Lewis & Thornhill, 2011). It was undertaken in the western region of Kenya, which boasts of six public universities, namely Maseno, Rongo, Kisii, Kibabii, Jaramogi Oginga Odinga and Masinde Muliro University of Science Technology. The target population included academic and non-academic staff of the six universities, totaling 4,476 employees. A formula by Fisher (1963, as cited by Kothari, 2004) was employed in calculating the final sample size as follows:

$$n = Z^2 \frac{pq}{d^2}$$

$$n = \frac{1.96^2 \quad 0.5 \ (0.5)}{0.05^2}$$

n   =   384
Where:
n = the desired sample size
z = the standard normal deviation at the required C.I = 1.96
p = proportion in the target population estimated to have characteristics of interest = 0.5
q=1-p=0.5, d=the level of statistical significance set = 0.05

Since the target population was less than 10,000, the following formula was used to determine the actual sample size:

$$nf = \frac{n}{1 + \frac{n}{N}}$$

$$nf = \frac{384}{1 + \frac{384}{4476}}$$

= 354

Where:

nf = required sample size when population is less than 10,000 n = required sample size when population is more than10,000 = 384

N = estimated population = 4,476

Therefore 354 was the calculated sample size.

This sample size is also often increased by 30% to compensate for non-responses, according to Israel, 1992 cited in Ogega (2020). This therefore means that:

Calculated sample size = 354

Additional 30% (meant to cater for the non-responses) = 152

Therefore, the final sample size = 506

This study employed stratified sampling design to choose the Western region of Kenya, and all the public universities in the region. The academic and non-academic staff were then grouped into clusters. Thereafter simple random sampling was used to select individuals from each cluster. The data herein was obtained through questionnaires put in a matrix form on a likert scale where respondents were supposed to tick the relevant response inside a box. Data collected from the questionnaires was analyzed statistically using Statistical Package for Social Scientists (SPSS) version 25. Inferential statistics was used to examine the relationship between the variables. Testing was then done using simple linear regression analysis to establish the effect of the independent variables on the dependent variable as had been hypothesized.

To determine the reliability of the research instrument in this study, a pilot study was done at Moi University, comparable to the institutions being used in the real study as far as characteristics and behaviors of interest were concerned. The instrument was reliable as all the variables met the threshold of a minimum of 0.70. Validity was also assured as the sample was acceptable, with KMO values of 0.505 and 0.538.

3.0 Results

3.1 Demographic Information

The information regarding the demographic profile of the respondents included institution they worked for, gender, age, academic qualification, years worked and position held. The majority were from the oldest institution among the six (Maseno University) at 38%, for both academic and non-academic staff. The majority of the respondents were male (63% and 57%) for the academic and non-academic staff respectively. Among the academic staff, the majority were between the ages 40-49, while among the non-academic, the majority were between 30-39. Over 51% of the academic staff were PhD holders, whereas the majority of non-academic staff had Bachelors degree (31%). On work experience among the academic staff, the highest was 1-5 years at 44%, whereas 40% of the non-academic staff had worked for 6-10 years. The position held by the vast majority of academic staff was that of lecturer (69%), while most non-academic staff fell among the others (43%), which included drivers, sweepers, clerks, etc.

3.2 Effect of Organizational Justice on Counterproductive Work Behavior

This study sought to find out the effect of organizational justice on counterproductive work behavior among employees in public universities in western region of Kenya.

Table 1 Model Summary of Organizational Justice and Work Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.576[a]	0.332	0.330	0.47630

a. Predictors: (Constant), Organizational Justice
b. Dependent Variable: Work Behavior

The model summary presented in table 1 shows that for organizational justice (X_1), the outcome was: the coefficient of determination (R square) of 0.332. This indicated that the model explained 33.2% change in the dependent variable. Adjustment of the R square did not change the results substantially, having reduced the explanatory behavior of the predictor from 33.2% to 33%. This means that the model is fit to be used to generalize the findings.

Table 2 Linear Regression ANOVA Results for Organization Justice

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	45.288	1 402	45.288	199.632	.000[b]
	Residual	91.198		0.227		
	Total	136.486	403			

a. Dependent Variable: Worker behavior | b. Predictors: (Constant), Organizational Justice

Table 2 shows the Analysis of Variance (ANOVA) of the relationship between organizational justice and CWB. The results indicated that the model is statistically significant in explaining the relationship between organizational justice and CWB in the public universities in Western Kenya (p-value<0.05). In this regard, the null hypotheses H_{01} is rejected and it is concluded that there is indeed significant effect of organizational justice on CWB in the public universities in Western Kenya region.

Table 3 Coefficients of Organization Justice and Counterproductive Work Behavior

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.674	0.096		48.715	0.000
	OJ	-0.481	0.034	-0.576	-14.129	0.000

a. Dependent Variable: Counterproductive Work Behavior

Table 3 presents the regression results of organization justice on counterproductive work behavior, with a constant (p-value = 0.000) of 4.674. This implies that even without organizational justice, the public universities seemed to display some form of negative work behavior. The gradient coefficient of -0.481 is the extent to which a unit change in organizational justice caused a change in work behavior. Therefore, the organization justice and work behavior model can now be presented as:

$Y = 4.674+-0.481X_1 + \varepsilon$

T-test was used to identify whether the predictor was making a significant contribution to the model. The results show that organizational justice (t =-14.129, P<0.05). This means that organization justice was significant (p-value = 0.000) in negatively influencing counterproductive work behavior in public universities in western Kenya region.

4. Discussion

The objective of the study was to determine the effect of organizational justice on employee work behavior. Yean and Yusof (2016) showed that if employees perceive that actions and practices in the organization are fair and honest, they will show more extra-role behavior and other positive

work behaviors which are beneficial to the development of the organization. It has also been recognized that when workers perceive fairness from the organization, they labor with more commitment and effort (Aguilera, et al. 2007) thus avoiding CWB. In this regard organizational justice is presumed to be a universal predictor of positive employee and organizational outcomes, curbing CWB. This is supported by the findings of this study which indicate that there is significantly negative association r=-.576[a] **P<0.01 between organizational justice and counterproductive work behavior in public universities in western Kenya region. The multiple regression results show t = -14.129and P=0.00. The model explained 33.2% of the variation in employee work behaviour.

These findings are in line with those of Pan, Chen, Hao and Bi (2018) and Nasir and Bashir (2012) who also found a significant relationship between organizational justice and employee work behavior. The idea behind organizational justice is that employees, being active observers of the goings on within organizations, see how both rewards and punishment are meted out. They may perceive such allocations as fair or unfair based on distributive, procedural and interactional justice. Thus, the transaction process of organizational justice and counterproductive behavior is rooted in the equity theory which hypothesizes that workers compare their portion of outcomes to inputs and experience either equity or inequity.

5. Conclusion

The study concluded that organizational justice significantly and negatively affected employee work behavior in public universities in western Kenya region. Therefore, a solid organizational justice system should be entrenched in the strategic HRM processes and practices of these universities in order to secure and sustain employee productivity and positive behavior. For example, instead of screening employees for potentially deviant tendencies, organizations should focus on creating a fair work environment that prevents such behavior. In such an environment, employees are treated with respect, there are fair procedures, as well as equitable outcome distributions. Apart from that, all categories of justice, whether distributive, procedural or interactional should be seen to be fair by all employees so that deviance at work does not result.

Recommendations

Public universities should develop strategies that can insulate their staff from engaging in CWB by implementing policies that enhance justice within them. The universities must therefore adjust to a culture that is based on equity, with employees adopting the same frame of mind, and management actively participating in ensuring that justice filters down to the whole organization, by promoting and maintaining this organization climate. Any employee who violates organizational norms should be punished, with the severity of the violation matching the punishment.

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An Exploratory Study on Teaching and Learning Situation for STEM Education in Five African Countries

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Abstract: *The purpose of this study was to examine the teaching and learning situation for science, technology education and mathematics in five African countries. The study adopted an exploratory research design. This design aimed atexporing the perception of teachers regarding the teaching and learning situation for science, technology education and mathematics in five African countries, including the following: Cameroon, Côte d'Ivoire, Ghana, Kenya, and Senegal. The study sample involved teachers from 13 secondary schools who teach mathematics, science, or technology subjects. A total study sample size of 24 teachers was purposively selected from the 13 schools in five African Countries. Interview guides and focus group discussions were the major data collection instruments employed by the study. The data analysis procedure was based on qualitative content analysis using the Qualitative Data Analysis software MAXQDA. The results revealed that the teaching situation in Africa has improved in recent years, but many fundamental problems and challenges in everyday school life still prevail. Based on the empirical findings, the five fields of action for improving STEM education could be analyzed through: teacher framework, teacher training, school infrastructure, competence orientation, and educational equity for girls. Based on these results, it can be concluded that the quality of STEM education in the five countries involved has not yet reached an established and robust teaching line. There is a significant need for action regarding teachers and their training, school infrastructure, and students' motivation, especially among girls.*

Keywords: *Teaching situation, African countries, STEM education, Teacher training, School infrastructure, Offer situation.*

INTRODUCTION

An important contributing factor to a country's growth is undoubtedly education. There is a correlation between investment in education and economic development, and it can be assumed that educational development and economic growth are reciprocally dependent (Tikly et al., 2018). Even if its implementation takes a long time, higher investment in human capital leads to significant economic improvements, especially in developing countries. Collin and Weil assume that, in this context, investments in better education are more cost-effective than investments in physical capital to achieve certain income targets (Collin & Weil, 2020). In the case of many African countries, one concern is to give young people an opportunity for education and motivate them to study science and technology subjects. In order to achieve this goal, high-quality education should be the centre of focus. Motivating and competence-oriented teaching in schools and universities should prepare future workers and managers with a solid foundation in mathematics, science, and technology to act competently with regard to social, professional, and individual issues. In terms of educational policy and economics, it is undisputed that STEM education (science, technology, engineering, and mathematics) can contribute significantly to addressing many of the world's most pressing problems, such as poverty, environmental degradation, contaminated water, lack of food security or energy problems, among others (Clynes, 2016).

In light of the outlined importance of STEM education for social and economic development and by considering the educational situation in Africa, described in the following section, the present paper investigates the situation of STEM education as directly perceived by African teachers in order to be able to derive substantiated suggestions for improving the educational situation. The purpose of this study is to first explore the supply situation for STEM education in five African countries from teachers' perspectives, then generate a systematic and connectable descriptive knowledge of the current teaching and learning situation and its implications for promoting STEM education in those five mentioned African countries.

For several years, many African countries have already faced education policy, economics, and implementation challenges. However, in the discourse, it is often assumed that the fundamental education problems in Africa have primarily political causes (Boyang, 2017). The political conditions in some African countries are essentially fragile, and education policy decisions tend to change continuously. They face various problems implementing education policy reforms (Otara, 2012). Thereby, curricula and pedagogical questions are often intermingled with economic and political decisions. In many cases, there is no connection, or only a weak tie, between the educational content being taught and the actual needs and substance of the economy (Gumede, 2017). The demographic change in many African countries, the relatively low spending on education, the lack of school infrastructure, and the absence of well-trained teaching staff are additional obstacles in improving the quality of education. Considering the ever-growing population in Africa, there is an alarming shortage of progress in education and literacy. Economic recovery and sustainable development in Africa depend on many factors, with education considered a crucial aspect for better individual and social opportunities (Otara, 2012).

Although STEM education is considered an essential pillar for school, and higher education in Africa, a fundamental need for optimization has been identified (Blom et al., 2016). Critical aspects here are an insufficient and unclear strategy in policy, a lack of connection between the content of the curriculum of STEM subjects and the actual needs in the professional and working world, inadequate professionalisation of teachers, and a shortage of teachers in STEM subjects (Zinn et al., 2019). Gender disparity and low research development are noted for the STEM sector (Blom et al., 2016). Problems also arise from the low pay of teachers, the educational output in STEM subjects, and the generally low acceptance of the subjects (Tikly et al., 2018). In the last two decades, the development of education in Africa has been characteried by remarkable progress at all levels of schooling: Africa has experienced a significant increase in enrolment rates (CESA, 2017). However, this optimism still hides the enormous inequalities and multiple deficits in the education system. These include inadequate infrastructure and classrooms and teachers, which unfortunately have not increased proportionally to the number of pupils. Significant school levels such as kindergarten, technical and vocational education, universities, and non-formal education are poorly developed, although their general importance increasingly attracts attention (CESA, 2017). Although transfer students from primary to lower secondary school have risen, declining completion rates and low transfer rates to upper secondary school indicate the prevalence of educational problems (Doyle et al., 2017).

One problem that has already been mentioned many times is the supply of qualified teachers at the secondary level. Half of the teachers in secondary schools are not sufficiently qualified (Chipindi & Chipindi, 2016). It is estimated that an additional 5.7 million teachers (2.1 million for primary and 3.6 million for secondary) are needed to achieve the Sustainable Development Goals for education and health in Africa, not including pre-primary teachers, trainers, and school managers (Tikly et al., 2018). Some African countries are trying to actively address the challenges in teacher education by structurally promoting STEM education at the higher education level as part of teacher education and training. This is the case, for example, for the Senegalese government, which has inaugurated several measures, such as establishing new research universities or implementing programmes specifically to promote science and technology courses (Doyle et al., 2017). In Zambia, where the shortage of teachers in mathematics and science is also a critical problem, the government initiated a Fast Track Teacher Education Programmes (FTTEP) with the support of development partners. The FTTEP aimed to increase the supply of qualified teachers promptly, particularly in critical fields such as engineering, mathematics, and science (Doyle et al., 2017).

Measures were taken to promote Information and Communication Technologies (ICT) for improving access, quality, and relevance of education and skills acquisition for Africa's development (CESA, 2017). In addition, educational policy measures are being implemented to promote vocational education and training. In South Africa, Egypt, Ghana, Tanzania, and Ethiopia, the importance of high-quality qualifications for teachers and trainees at vocational schools has been recognized. Hence, reform efforts have been made in vocational education (Everton & Arne 2020). These African countries have fundamentally updated their training and framework curricula. The government in South Africa aims to incorporate international standards

concerning the development of vocational education and training curricula to raise the professionalisation of teachers and graduates of vocational schools to an internationally comparable level (Zinn et al., 2019). These brief examples of the initial situation clarify that Africa has adopted various initiatives to improve education in recent years. That progress has already been made in some areas. Nevertheless, there is still a fundamental need to improve education provision and implement international standards (Blom et al., 2016). In this context, this article deals with the current situation in schools from the perspective of teachers and the analysis of possible approaches to improve STEM education. The purpose of this study was to examine the teaching and learning situation for science, technology education and mathematics in five African countries.

METHODOLOGY

The study employed an exploratory research design. This design aimed at exploring the stem situation in the selected African countries. The study employed qualitative paradigm, which worked hand in hand with exploratory research design to produce quality and in-depth understanding on STEM education in five African Countries.

The study sample consisted of teachers from 13 secondary schools (KII) who teach mathematics, science, or technology subjects. A total study sample size consisted of N = 24 teachers who willingly agreed to participate in the study. The sampled teachers were from the five African countries: Cameroon (n = 5), Côte d'Ivoire (n = 8), Ghana (n = 6), Kenya (n = 4) and Senegal (n = 1). Purposive sampling was used to obtain a diverse sample of participants to suit the aim of the study. The choice of this technique was based on the act that teachers are the key holders of the information required by the study. At the time of the interview, the interviewees were between 25 and 46 years old (M = 36.67 years; SD = 5.62 years). Their teaching experience is between 2 and 19 years (M = 8.25 years; SD = 5.76 years). More details about the participating schools and interview partners are given in Table 1.

In terms of data collection instruments, the study used semi-structured interviews, based on guiding questions to ensure good comparability of the individual interview statements and to meet the explorative character of the study. Due to the restrictions caused by the Covid-19 pandemic and research economic aspects, all interviews were conducted using phone calls with each participant individually. Interviews were conducted until data saturation was reached according to the theoretical sampling. The collected database includes 24 interviews with a total length of 17.4 hours, with an average interview length of 45 minutes (MIN = 32 min; MAX = 1h 29 min). After obtaining participants' consent, the interview conversation was recorded. The participants were informed that the interviews would be treated confidentially and that the results would be reported anonymously.

The data analysis procedure was based on qualitative content analysis, as per Mayring (2015). After transcribing the interviews, MAXQDA 11 (Qualitative Data Analysis Software) was used. Each category was formed in an iterative process, deductively based on the interview's main points of the guideline and inductively in the rating process. One thousand thirty-three (1033)

codes were assigned in the three main deductive categories (context of teachers, classroom and teaching context, and school context) and 275 codes in the inductive category characteristic Challenges. This results in a total number of 1308 codes. In order to ensure the reliability of the coding, the interview data were analysed twice, and the reliability measures (interrater reliability) were determined in the individual categories. The agreement analysis made it possible to identify and reduce problems in the delimitation or definition of the categories at an early stage and to recognize differences in the approach of the coding persons. The matching analysis served as a tool for checking, securing, and improving the quality of the coding process. Throughout this procedure, agreement values between 69% and 87% were achieved for the categories, evaluated as acceptable to very good (Campbell et al., 2013).

RESULTS
Demographic Characteristics of the Respondents

All countries involved in this study require the successful completion of a teaching degree as a prerequisite for obtaining a teaching qualification. However, each country adapts these requirements to address the teacher shortage. All interviewees finished college with at least a bachelor's degree and completed a teacher training program.

Regarding the gender distribution of the respondents, 21 of them were male, while 3 of them were female. With reference to the type of school they taught, 16 of the respondents were from urban schools. Only 8 of them were from rural secondary schools.

About the age bracket, only two (2) KII were below the age of 30 years. Only 16 KII ranged in the age bracket of 31-40 years. The remaining group (8) was above 40 years.

With regard to the countries the respondents came from, 5 of them came from Cameroon, 8 came from Côte d´Ivoire, 6 came from Ghana, 4 came from Kenya, while 1 came from Senegal.

With reference to subject coverage, 10 of them teaches physics, 3 teaches Biology, 9 are for Mathematics, while only 1 is for computer sciences

Teaching and Learning Situation for STEM Education In Five African Countries

Context of Teachers

Due to the lack of teachers, the abundance of work, and the desire to change jobs, some teachers (n = 3, approximately 12.5%) have taken additional training in subjects other than their major subject, namely biology (Duration: 3 months), engineering (Duration: 3 years) and statistics (Duration: 1 year); No=103

In addition, 42% of the respondents regularly attend school-internal in-service training or individual external training programmes (Duration: 2 hours to 1 week) to develop their subject-specific and interdisciplinary competencies further.

> Every year, I go on a professional exchange organised by the University of Cambridge, where we have training programmes for teachers. In most of our training programmes, we adapt our curriculum to the innovations: how to improve our teaching management, methodology, class management, building skills in STEM, improving exam content and form, student management, teacher-student buffers, trust between teachers (KII 16, 2022).

An analysis of the five countries shows that the surveyed schools in Ghana, for example, invest more in the in-service training of their teachers. Several teachers (n = 14, approximately 58.3%) call for more teacher training in their subjects, especially with regard to digitalization in education (n = 5, approximately 20.8%). Further, KII 16 had the following to say:

> I have found that the way we teach science subjects here in Africa is difficult for learners to understand. So if we have experienced and qualified teachers with good knowledge of [appropriate] teaching methods, we could make the subject more understandable for students (KII 16, 2022).

Whilst a good half of the teachers surveyed justify their (extrinsic) motivation to work in a secure job, good working conditions, and a teaching tradition in their own family, the rest (around 42%) of the respondents state that they are intrinsically motivated and have a strong passion for teaching and transmitting knowledge. One teacher from Kenya expressed his enthusiasm as follows:

> I want to help young people become important people for tomorrow's development. They come to school when they are young; they leave when they are older with at least some good knowledge. [...] Identifying natural talent: There are gifted students who are particularly interested in innovation. So if we are able to identify them, nurture them and help them, we will go far. (KII 22)

Some of the interviewees see their job as an opportunity to share their expertise and are passionate about educating students to become future actors and contributors to the development of their country. According to the following quote, teachers find it important to encourage students to engage in science education.

> Why did I decide to teach? To help the students improve their educational background or academic career, but also to make them understand the concepts. [...] I know that science is challenging for most of our students. I thought I could figure out how we can best simplify the science topics to ensure students' understanding the best (KII 16, 2022).

Of the respondents, 58% note that there is generally a poor labour market situation in the education sector, coupled with low monthly salaries. The majority of teachers state that they are not paid sufficiently and cannot have a satisfactory standard of living with the relatively high living costs.

> Due to lack of job opportunities, there is no complete satisfaction. We do not get enough money for the work we do. Therefore, we try to cover our monthly financial needs through other jobs. Teachers choose to work in primary school because there are no other opportunities (KII 1, 2022).

Besides, the discrepancy between intrinsic motivation and personal satisfaction is illustrated by the following quote:

> After all, there is a big difference between passion and satisfaction now. As a person, I don't regret being a teacher, but of course, there are things about doing the job that lead to dissatisfaction, and if these things didn't exist, satisfaction would be complete. As a consequence, we try to balance the monthly income with other work (KII 2, 2022).

In addition, other demotivating factors identified include insufficient support from the education administration, limited cooperation between schools and government, lack of motivation, low pre-education level, and lack of basic skills among the students, in addition to infrastructural deficiencies. One participant with obvious intrinsic motivation claims: On the other hand, the level of the students is low, it is discouraging [...] and it is a tragedy when you see what these students write and produce, it is terrible [...]. Also, the students are not motivated to learn (KII 2, 2022).

Furthermore, a discouraging factor for teachers is the lack of labour market opportunities for their learners after school:

> After finishing university, students trained in science and technology should have a good job, but we don't have enough industry to employ these students, so they do other jobs, like selling tomatoes in the market. I find it difficult and wonder about the purpose of our education. We need enough industry and businesses for our graduates (KII 17, 2022).

Teaching and Learning Situation for STEM Education
The study sought to investigate teaching and learning situation in 5 African countries. The situations investigated included the following: classroom and teaching context, Classroom and teaching context; Context of the school

Classroom and teaching context (Number of coding = 297)
When asked how teachers prepare lessons and which sources they use for this purpose, all respondents reported that they use official educational plans, which specify the educational content in different subjects by grade. Teachers work with textbooks, designing the teaching content through the official educational plan, and using internet sources for additional lesson conception. To the question: "Is the conception of lessons done alone or together with colleagues, also from other schools?", 35.5% of the teachers answered that they always prepare lessons with colleagues; 33% claimed they always prepare them alone, and 21% prepared with colleagues only when necessary. When asked why some teachers prepare lessons by themselves, the following reasons were given several times: busy timetable, lack of time, lack of teachers, dysfunction of the teacher collegial and lack of time for teamwork. Some teachers perceive themselves as very experienced and prefer to work alone.

The majority of teachers (84%) reported using student-centered teaching methods and motivational and competence-oriented approaches in their teaching. The topics covered in class are oriented according to a well-defined classical system. Specifically, one interviewee explained the general structure of his teaching:

> The learner is encouraged to mobilize his knowledge by touching his interests, which enables him to contextualize the acquired knowledge and understand its usefulness. The learner is an active subject in the teaching and in the creation of his own knowledge. [...] Therefore, the lesson always starts with an experimental activity, and then a certain property of the activity is introduced. To check whether the message has been received, practical exercises are carried out (KII 1, 2022).

However, due to the workload also related to student-centered teaching methods and limited teaching time, a quarter of the respondents sometimes also apply teacher-centered teaching methods: this was approved by interviewee 20 who had the following to say: "…with our heavy workload, most teachers sometimes tend to use teacher-centered method, which cannot provide skills to the learners" (KII 20).

About one in six (16.7%) report that student's skills and learning backgrounds are often weak, and some students have cognitive learning disabilities. The following quote is given:

> Children's intellectual competence has clearly declined. The most difficult moments for me are when I correct exams; I ask myself whether I have conveyed the message. [...] Today, when I often think about giving up the profession of teacher, it's for this reason: you can't ask a child to clean a shoe, and he comes back with that shoe in worse condition (KII 2).

On further emphasis, KII 20 had the following to say: "The competence acquisition of the pupils is, to be honest, very low because the teaching method often does not allow them to be given more room to learn*"* (KII 20)

Teachers report that school examinations can be written, oral, and/or practical. However, the examinations are primarily conducted in writing due to a lack of materials. Half of the teachers (50%) almost give exclusively theoretical lessons without practical sessions because the required equipment is lacking. This is also reflected in the exams, which are mostly theoretical. A teacher comments as follows: "Teaching is more theoretical because the appropriate framework for practice is not available." (KII 8)

The other half of the teachers work in schools that do have the necessary equipment, so they give up to 40% practical lessons and also up to 40% for practical examination:

> ... each topic has a practical aspect (theoretical 60%, practical 40%). Due to the availability of premises and materials, all topics that have a practical aspect are carried out by the girls. We help girls to do practice phases on their own (KII 21).

This group includes teachers who carry out project work (n = 10, approximately 41.7%) and excursions (n = 8, approximately 33.3%) with their students. They undertake projects on sustainability, food production, and current societal and regional problems, among others, also involving extracurricular learning sites (e.g., in Ghana, the Volta River Authority (VRA), nuclear power plants; hydroelectric power plants; lakes, and marine areas to study the marine ecosystem as well as companies in the food industry).

Context of the school (Number of coding = 633)

The interviewees were also asked to indicate which spatial and material resources are available for their teaching in school and which resources they would like to see. The findings are diverse and show that private schools are well-equipped. In contrast, public schools, albeit with country-specific characteristics, state a need for spatial and material equipment optimization.

> In our school, we have all the resources. Our private school is well-equipped. In our public schools, however, there are many challenges. Some government schools do not have enough physics teachers, so they use their own math teachers to teach physics. Most of them lack equipment for teaching (KII 15, 2022).

Adding more weight on the same point, KII 20 had the following to say:

> We have enough resources and equipment in the laboratory. Our school offers a broad curriculum. For each technical subject, we have workshops for electricity, technology, woodworking and mechanics; for these workshops, students are allowed to use machines. We have computer labs (KII 20, 2022).

While interviewed schools, for example in Kenya, provide sufficient funds for the practical subjects and classrooms according to the teachers, the participating government schools, for example in Cameroon and Côte d'Ivoire, do not have the necessary funds to purchase learning materials and can work only in outdated laboratories, if present at all:

> We practically have almost all the equipment, but since it is very old, we don't use it too often, also because there is no laboratory and the time available for teaching is not enough. We just show the material to the students so that they get an idea of the lessons. In fact, when there is an opportunity, only teachers are allowed to do the experiment [due to resource constraints]. The students are spectators (KII 13, 2022).

On more emphasis, KII 2 reported the following:

> Teaching technologies used are outdated or missing. If I talk to a child about the cell or the heart and cannot visualize it, it is difficult for the child. Of course, it would facilitate the understanding process if we had easy access to didactic teaching materials (KII 2, 2022)

In Côte d'Ivoire, for example, respondents mention that, although most public schools say they have laboratories and libraries, they are empty due to a lack of equipment. "…that is a serious problem. The lab exists, but it is empty. [...] But when students touch the equipment themselves and do experiments, they develop more interest in the course" (KII 13, 2022).

According to interviewees from rural schools, teachers often only have textbooks, chalk, and blackboards. Concerned teachers would like to have basic equipment, such as an adequate power supply and Internet access.

> There is no equipment in our school. So we just ask for the minimum to help children understand and encourage them. We need electricity. Even if a teacher comes with his equipment, a computer or a projector, he cannot work properly for lack of electricity in the classrooms (KII 7, 2022).

Regarding room resources, 75% of respondents would like a (better) equipped laboratory, 45.8% a school library, and 62.5% a computer room (including computers). Regarding material equipment, the following are mentioned: projector/smartboard (66.7%), printer (29.2%), and software (12.5%, e.g., CAD "Computer-aided design"). Furthermore, there is a need for sufficient electrical supply (25%), access to the internet (37.5%), and a fundamentally improved infrastructure (water, toilet, etc.) at the schools (25%), as well as more spacious classrooms (54.2%).

During the interviews, teachers (75%) repeatedly mentioned the lack of support from educational administrations in terms of providing school infrastructure and resources for teacher training and excursion support. Changing education policies and lack of investment in technical education are fundamental problems mentioned by the interviewees:

> …the government does not invest much in technical education. It promises a lot but does not realize it. I know that there is no way that a country can develop without science and technology (KII 17).

Characteristic Challenges (Number of Codings = 275)

Since it can be assumed that there are country and school-specific characteristics, the outcomes reveal school-specific difficulties between urban and rural schools as well as between private and public schools. Although urban schools have their characteristic challenges, such as high student numbers, lack of qualified teachers, it is also observed that they are better resourced than rural schools. For example, in Côte d'Ivoire and Senegal, it has been shown that rural schools are facing a broader range of challenges. The interviewee from Senegal noted that villagers are unfriendly to teachers and do not support girls to get further education up until university; on the contrary, they even discourage them. Several teachers in villages in Côte d'Ivoire mentioned that most students do not have books or notebooks; furthermore, they have fundamental linguistic challenges when dealing with the teaching language, which is a foreign language.

> Here in the village, there is already a problem with the language used in class. We use a foreign language to teach, which is less spoken in the region. [...] Grade 9 children still have difficulties in reading. Only a few of them do the written exercises with texts. They prefer numeracy exercises without text (KII 10, 2022)

In addition, rural schools do not have the necessary teaching materials, and the teachers are not supported. Table 2 details the challenges stated by the teachers, specific to urban and rural schools.

Table 1

Challenges of the Individual Schools

	Challenges at the teacher level	Challenges in teaching	Challenges at the school level
			Lack of and/or outdated infrastructure
Urban schools	Lack of teacher training	Lack of practical relevance	Limited support from the government
	Lack of inclusive teaching	Abstract education	
	Lack of teaching skills		
	Lack of qualified teachers	Lack of basic skills	Lack of electricity/ internet in the classroom
		Lack of teaching and	
			Work overload
	Lack of motivation		learning materials
	Limited		education policy
		Poor learning backgrounds	Small classrooms
	Lack of STEM knowledge (in CAD, simulation, IT...)	Poor teaching method	
Rural schools	The villagers are unfriendly to the teachers	Linguistic difficulties	Gender disparity
		Including all the challenges listed in the urban schools	Lack of electricity/internet in the classroom
	Including all the challenges listed in the urban schools		

A comparative analysis between public and private schools shows that even with certain challenges such as lack of teachers, work overload, and lack of government support, private schools provide much more comfort in high-quality education than public schools. All the private schools surveyed have a computer room, required teaching and learning materials, motivated teachers, training for teachers, etc. It should also be noted that all of them urban schools.

DISCUSSION

Based on the assumptions of the supply-use models in Figure 1, this study investigated and analyzed the current supply level - from teachers' perceptions of STEM subjects - which included: teacher's demographic information, Teaching and Learning context, and Challenges. The descriptive findings provide qualitative insight into the current teaching situation of STEM education in Africa and confirm the educational problems in Africa outlined in the initial situation. Furthermore, the results enrich the empirical state of the research and make it possible to identify

four fields of action to address the teachers' issues and challenges to improve the situation in the participating schools.

Teachers' professional framework: The study confirms that the teachers are predominantly intrinsically motivated to pursue their teaching profession but are dissatisfied because of the personal constraints within schools and, in particular, the inadequate financial compensation for their work. As a result, their primary focus on student education becomes limited in favor of another occupation covering their monthly financial needs. This finding is consistent with the existing research findings of Zinn et al. (2019), whose case study included South African teachers. If one follows the statement by Okeke and Mtyuda (2017) that job dissatisfaction arises when output and input (e.g., remuneration, framework conditions) are out of proportion, which is reflected in the teaching level, resignation of teachers and lower performance of learners are to be expected. The structures of the education administration, as well as the provision of financial and human resources for education, are perceived by teachers as insufficiently supported, not goal-oriented, not efficient, and disadvantageous, which is also reflected in the lack of educational equipment.

Teacher training: In terms of teacher qualifications, the study results show that all the teachers surveyed have professional training in their subject of instruction for secondary schools, besides a bachelor's or master's degree. It has also been found that, unfortunately, only a few schools provide teachers with sufficient in-service and professional development opportunities. Respondents call for systematically designed teacher training structures in order to be able to improve their profession-oriented competencies in the dynamically changing STEM skills in the context of digitalized education and heterogeneity in schools. These claims are supported by the state of research on teacher professional development. For example, Kwakman (2003) agrees that professional development in schools requires engaging teachers in activities to foster new knowledge, skills, and values to improve their teaching. Student learning success depends on teachers' professional development competencies (Everton & Arne, 2020; Phinias, 2021).

Infrastructure improvement: Teachers report that practical teaching phases are hardly possible due to the lack of available space and infrastructure, which makes teaching and learning difficult, all the more so for the students, for whom the lessons seem too abstract and not very tangible. They hardly see any connection between their education and the everyday problems of the world around them.

Competence orientation and interest orientation in teaching: The teachers state in general that the quality of STEM teaching is inadequate in terms of learning content, teaching, and learning methods, which is a barrier to the acquisition of STEM skills. Moreover, the World Bank's report on STEM research in sub-Saharan Africa indicates that the quantity and quality of STEM instruction are far from well-developed (Blom et al., 2016). The teaching and learning process should foster students' critical thinking and creativity, ultimately serving their individual and social development. The study results indicate that, in most schools, the examinations are held in a way that only factual knowledge of students and no STEM skills are measured. Many exams are

criticised for their "unchallenging" questions that only require students to recall facts (Tikly et al., 2018). The exams do not reflect the process-based learning goals of STEM education, such as advancing science and technology understanding along with improving problem-solving skills, but focus on the lowest range of demands. The findings indicate that the instructional offerings do not promote students' critical thinking and creativity to a sufficient degree, thus calling for a competency-based approach to the instructional propositions (Ngondi, 2021).

CONCLUSION

This paper examined the current situation of learning and teaching STEM subjects from teachers' assessments. Despite improvements in recent years, some fundamental challenges in everyday school life remain, which lead to the limited quality of learning and teaching scientific and technical subjects. Limited quality, however, has been linked with numerous problems bedeviling the education, such as non-motived teachers and students, poor learning and teaching materials, abstract scientific and technical education, no or poor in-service training for teachers, and lack of electricity/internet in the classroom. For active development of education, along with effective policy decisions, it is recommended to pay close attention to the teaching and the learning conditions, learning purpose, and learning outcome. The interviewed teachers welcomed and encouraged the ideas expressed in the discussion to support and improve the current quality of STEM education. Therefore, a greater emphasis on the promotion of teachers, including their in-service training, especially in STEM subjects (e.g., specialised teacher training), as well as the need to integrate STEM skills into the curriculum, is seen as crucial components of educational programs.

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INFLUENCE OF SOCIO-DEMOGRAPHIC CHARACTERISTICS ON PTSD AND DEPRESSION PREVALENCE AMONG FEMALE SURVIVORS OF SEXUAL VIOLENCE IN NAIROBI COUNTY, KENYA

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Abstract: *This study examined the influence of socio-demographic characteristics on PTSD and depression prevalence among female survivors of sexual violence in Nairobi county, Kenya. A prepost study design with a quantitative approach to formulating a composite account of the findings and sequencing of the analytical operations was used. A sample of 139 survivors met criteria for PTSD and depression: age 18 to 49, married or not, living or having lived with an intimate partner, resided in Nairobi County, and sought treatment at the study sites. Purposive sampling was used to identify the study sites and the study sample. PLC-5 and PHQ-9 were used to collect data on PTSD and depression. Quantitative data were analyzed using IBM SPSS V.25. Prevalence of PTSD and depression was 71.2% and 80.6% respectively. PTSD prevalence on age 26-33 was 34.6%, married and single 20.9% each, Middle-level education 33.8%, Protestants, 40.3%, unemployed 33.1% while 42.4% had a trusted person to talk to. Depression among age 26-33 was 37.4%, cohabiting 20.8%, secondary school education, 30.9%, Protestants 51.8%, unemployed 35.3%, and 46.8% had a trusted person to talk to. The findings showed PTSD and depression were prevalent among survivors of sexual violence. Findings from this study will benefit practitioners and institutions offering mental health services to incorporate them into primary health care services. To deter sexual violence against women, involvement of men should be encouraged.*
Keywords: *Socio-Demographic Characteristics, Depression Prevalence, PTSD Prevalence, sexual violence, posttraumatic stress disorder, sexual violence depression, Female sexual violence*

INTRODUCTION

Various high-risk factors are likely to influence the severity of Posttraumatic Stress Disorder (PTSD) and depression. These include factors such as lack of empathy, hostility towards women and emotionally unsupportive family and friends, among others (Wilkins et al., 2014). In addition, other factors such as lack of employment opportunities and community weakness on sanctions against perpetrators of sexual violence, influence the development of posttraumatic stress disorder and depression. Other factors include but are not limited to norms that support male superiority and sexual entitlement which do not favor women. Wilkins et al. (2014) further posits that these rigid social beliefs about what is masculinity and femininity have been reported as likely influencers for the development of PTSD and depression among the sexually abused women. Accordingly, to protect, lessen and prevent sexual violence against women, the women need to aim at higher academic achievement as a protective factor, as this study found out.

Globally, some of the most violated norms are those associated with sex (WHO, 2015). Sexual violence against women has been reported even in the most developed countries. Sexual violence is a most pervasive vice and yet it is the least visible human rights violation (UNICEF, 2020). Sexual violence refers to all behaviors directed at another in form of abuse, harassment, or assault of a sexual nature (Basile et al., 2014). All forms of sexual violence have been associated with elevated chances of developing serious mental health problems, PTSD and depression among others (Vallieres et al., 2020). Existing literature shows that SV is a significant factor in the development of PTSD and depression among survivors of sexual violence. Empirical evidence shows that PTSD and depression are among the major mental disorders found in sexually abused women (Fiske & Shackel, 2014). Several studies confirm that survivors of sexual violence tend to be predisposed to psychological distress resulting in PTSD and depression. The traumatic effects of sexual violence may lead to intense, intrusive thoughts and feelings which are symptoms of PTSD and depression (APA, 2013).

From a global perspective, the World Health Organization (2013) reported that in 2010, 30% of women aged 15 years and above had experienced sexual violence during their lifetime. During the COVID-19 pandemic, violence against women increased with 50% of women reporting abuse either to themselves or to a woman they know (Women & Count, 2021). According to Tarzia et al. (2018) in a study in Australia, women who are sexually violated by an intimate partner, are found to have significantly higher levels of PTSD or depression when compared to those who were violated by strangers. Additionally, the authors say that sexual violence by an intimate partner contributes to poorer mental health outcomes as it is associated with higher risks of serious injury or death. Further, the authors aver that repeated attacks pose higher risks for sexually transmitted diseases as well as increased feelings of shame by a survivor. This, they add, may lead to the development of PTSD and depression. Another study in Sweden (Tilhonen et al., 2014), posited that identifying factors that may influence the development of PTSD following a sexual violation, allows for early interventions among survivors who are at the greatest risk of developing PTSD and depression. The authors aver that having been sexually violated lead to the development of depression. Du Mont et al. (2021) in Canada, say that a range of factors influence the development of PTSD symptomatology. The authors argue that prior to sexual violence, stalking as well as sexual assault by a known partner were influencers to the development of PTSD. In Turkey, Sen and Bolsoy (2017) study showed that women with low level of education experienced sexual violence more than those with a higher level of education and the most fundamental human rights for women are employment and social security, which consequently ensure their security and safety. The authors added, when the level of education increases, violence against women decreases, hence reducing the risk of developing PTSD and depression. Comparatively, the authors argue, while one out of every five women with a higher level of education is vulnerable to violence, one out of every two women with low level of education is vulnerable to sexual violence (Sen & Bolsoy, 2017).

On a regional level, Shackel and Fiske (2016) study in the Democratic Republic of the Congo, Uganda and Nothern Kenya, revealed that in these conflict-ridden regions, sexual violence against women was prevalent. The women were found to have severe PTSD compared to women who had

not been exposed to violence. Oshodi et al. (2020) assessed early to long-term mental health outcomes on adolescent girls who were survivors of sexual violence. A number of the survivors exhibited depression symptomatology and manifested PTSD rape-related symptoms in the first two weeks after being sexually abused. They were supported with weekly monitoring over a 6-week period. On post-assessment, psychopathology rates for PTSD and depression were lower than the two-week and the one-month rate respectively. The authors showed that prevalence of PTSD and depression was notable among adolescents and recommended interventions such as traumafocused cognitive behavior therapy and interpersonal therapy as they have been shown to reduce PTSD and depression symptoms. In Kenya, Extant studies show that a high proportion of sexually abused women do not seek medical help and/or intervention. Women attribute non-disclosure to feeling guilt, shame, self-blame, stigma, and societal ineptness to sexual violence (Gatuguta, 2018). The author adds that a culture by society of blaming the women for provoking sexual violence through either dressing skimpily, being in a wrong place at the wrong time, their nature of work, and stigma of being unfairly judged, prevented the women from disclosing and/or seeking treatment after rape. This non-disclosure lead to the development of PTSD and depression which could have otherwise been prevented had they sought intervention. A study on the prevalence of PTSD among adolescents in two secondary schools in Kenya showed that PTSD was prevalent among the adolescent boys compared to those of other counties except those who lived in the counties of Nairobi and Machakos and it showed prevalence of PTSD symptoms. The authors recommended that there is need for psychotherapy in all secondary schools to counter PTSD prevalence as well as protect the adolescents from comorbid diseases (Mukangi et al., 2020).

There is a paucity of information in the Kenyan context on the prevalence of PTSD and depression among survivors of sexual violence. It is this existing gap that gave the impetus for this study. Given this background, this study intended to examine the influence of socio-demographic characteristics on PTSD and depression prevalence among female survivors of sexual violence in Nairobi County, Kenya.

METHODOLOGY

This study was carried out at the Mama Lucy Kibaki Hospital (MLKH) and the Medical Missionaries of Mary (MMM) in Nairobi County, Kenya. The study used a pre-post design with a quantitative approach to formulating a composite account of the findings and sequencing of the analytical operations.

The study sample was 139 female sexual violence survivors, aged 18 to 49 years, married or not, living or having lived with an intimate partner, resided in Nairobi County, were seeking treatment at the two study sites, and met the inclusion criteria for PTSD and depression. The study used purposeful sampling to identify the two study sites and the sexual violence survivors who were seeking treatment at the sites.

Data was collected using a structured, self-administered, closed-ended survey questionnaire and the PCL-5 and PHQ-9 assessment instruments for PTSD and depression, respectively. Data

collected was used to determine the symptom levels of PTSD and depression. The questionnaires were coded using the respondents' code assigned at the start of the study. The data collected was coded, edited, classified, and analyzed using descriptive statistics.

Data cleaning was done before it was analyzed using the IBM Statistical Package for Social Sciences (SPSS) Version 25. A score analysis at baseline and at end-line assessment was performed. Evaluation of the prevalence of PTSD and depression was done using bivariate statistics. Reporting in this study follows conventional statistic practice and procedures, probability values of $p < .05$ were used to denote the statistical significance.

The study was approved by the Internal Review Board (IRB) of the United States International University-Africa, the National Commission for Science and Technology (NACOSTI), Mama Lucy Kibaki Hospital and Medical Missionaries of Mary. The study respondents signed informed consent prior to taking part in the study.

RESULTS

The study sought to examine the influence of socio-demographic characteristics on PTSD and depression prevalence among Female Survivors of Sexual violence. Table 1 shows the distribution of the respondents by social demographic characteristics and their influence on PTSD

Table 1: *Socio Demographic Characteristics and PTSD at Baseline Assessment*

Variables	Total (%)	PCL-5 Score	
		≤ 32 No PTSD	≥ 33 PTSD
Age			
		10 (7.2)	26 (18.7)
18-25	36 (25.9)		
26-33	60 (43.2)	12 (8.6)	48 (34.6)
34-41	30 (21.6)	12 (8.)	18 (13.5)
42-49	13 (9.4)	4 (2.9)	9 (6.5)
Marital Status			
Married	33 (23.7)	13 (9.3)	20 (14.4)
Single	35 (25.2)	5 (3.6)	30 (21.6)
Cohabiting	32 (23.0)	9 (6.5)	23 (16.5)
Separated	13 (9.4)	1 (0.7)	12 (8.7)
Divorced	12 (8.6)	4 (0.7)	8 (5.7)

Widowed	8 (5.8)	4 (2.9)	4 (2.9)
Dating	6 (4.3)	2 (1.4)	4 (2.9)
Level of Education			
No formal education	4 (2.9)	1 (0.7)	3 (2.2)
Primary	37 (26.6)	11 (7.9)	26 (18.7)
Secondary	56 (40.3)	16 (11.5)	40 (28.8)
Middle level college	38 (27.3)	9 (6.5)	29 (33.8)
University	4 (2.9)	1 (0.7)	3 (2.2)
Religious Affiliation			
Catholics	47 (33.8)	11 (7.9)	36 (25.9)
Protestant	85 (61.2)	26 (18.7)	59 (42.5)
Muslim	3 (2.2)	1 (0.7)	2 (1.5)
Atheist	1 (0.7)	0 (0.0)	1 (0.7)
Others	3 (2.2)	0 (0.7)	3 (1.5)
Occupation Status			
Formal employment	19 (13.7)	7 (5.0)	12 (8.7)
Informal employment	58 (41.7)	17 (12.2)	41 (29.5)
Not employed	60 (43.2)	14 (10.1)	46 (33.1)
Others	2 (1.4)	0 (0.0)	2 (1.4)
Those having trusted person to talk to			
Yes	84 (60.4)	25 (18.0)	59 (42.4)
No	55 (39.6)	13 (9.4)	42 (30.2)
	139	15 (10.8%)	124 (89.2%)

Based on Table 1 below; those who scored ≤ 32 were considered to have no PTSD according to the PCL-5 scoring and interpretation schedule. Those who scored ≥ 33 were considered to have PTSD. Analyzing by age bracket 73.3% had positive scores for PTSD, those aged 18-25 made up 18.7%, those aged 26-33 made up 34.6%, age 34-41 were 13.5% while those aged 42-49 were the fewest (6.5%).

Analyzing by marital status 75.6% had positive scores for PTSD, single and having PTSD (21.6%), cohabiting (16.5%), those married were 14.4%, separated (8.7%), divorced (5.7%), while those dating and widowed made up (2.9%) each.

When analyzed by the level of education 0.7% had positive scores for PTSD, 2.2% had no formal education and university level education respectively. 33.8% had mid-level college education, and those with primary school level of education were 18.7% while those that had secondary school level of education made up 28.8%.

In regards to religious affiliation 69.9% had positive scores for PTSD, protestants made up 42.5%, Catholics 25.9%, Muslims 1.5%, those from other faiths 1.5% and atheists 0.7%. When analyzed by occupational status, those who scored positive for PTSD were; formal employment 8.7%, informal employment 29.5%, and not employed 33.1% while those in other categories not provided for in the study made up 1.4%.

Respondents were asked if they had a trusted person who they could talk to, those that answered "Yes" 42.4% and those that answered "No" 30.2% scored positive for PTSD which made up of those who scored positive for PTSD in this category.

Further, the study sought to examine social demographic characteristics and their influence on depression. Table 2 shows the distribution of the respondents by the relationship between sociodemographic characteristics and respondent's scores on depression symptoms.

Table 2
Socio Demographic Characteristics and Depression at Baseline Assessment

Variables	Total	Depression scores	
		Below clinical threshold	Above clinical threshold
Age			
18-25	36 (25.9)	11 (7.9)	25 (18.0)
26-33	60 (43.2)	8 (5.8)	52 (37.4)
34-41	30 (21.6)	5 (3.6)	25 (18.0)
42-49	13 (9.4)	3 (2.2)	10 (7.2)
Marital Status			
Married	33 (23.7)	9 (6.5)	24 (17.2)

Single	35 (25.2)	10 (7.2)	25 (18.0)
Cohabiting	32 (23.0)	3 (2.2)	29 (20.8)
Separated	13 (9.4)	1 (0.7)	12 (8.6)
Divorced	12 (8.6)	1 (2.2)	11 (6.5)
Widowed	8 (5.8)	1 (0.7)	7 (5.0)
Dating	6 (4.3)	2 (1.4)	4 (2.9)
Level of Education			
No formal education	4 (2.9)	1 (0.7)	3 (2.2)
Primary	37 (26.6)	7 (5.0)	30 (21.6)
Secondary	56 (40.3)	13 (9.4)	43 (30.9)
Middle level college	38 (27.3)	5 (3.6)	33 (23.7)
University	4 (2.9)	1 (0.7)	3 (2.2)
Religious Affiliation			
Catholics	47 (33.8)	12 (8.6)	35 (25.2)
Protestant	85 (61.2)	13 (9.4)	72 (51.8)
Muslim	3 (2.2)	1 (0.7)	2 (1.4)
Atheist	1 (0.7)	0 (0.0)	1 (0.7)
Others	3 (2.2)	1 (0.7)	2 (1.4)
Occupation Status			
Formal employment	19 (13.7)	4 (2.9)	15 (10.8)
Informal employment	58 (41.7)	11 (7.9)	47 (33.8)
Not employed	60 (43.2)	11 (7.9)	49 (35.3)
Others	2 (1.4)	1 (0.7)	1 (0.7)
Those having trusted person to talk to			
Yes	83 (59.7)	18 (12.9)	66 (46.8)
No	56 (40.3)	9 (6.5)	46 (33.8)

Out of the sample of 139, 112 respondents scored positive for depression symptoms. When analyzed by age, 80.6% had scores above the clinical threshold for depression, 18% was made up of those aged 18-25, (37.4%) 26-33, (18%) 34-41, and (7.2%) those aged 42-49 years.

In regards to marital status 79% had positive scores for depression symptoms, those married made up 17.2%, singles (18.0%), cohabiting (20.8%), separated (8.6%) divorced (6.5%) widowed (5.0%) and dating (2.9%).

Analysis by the level of education showed that 80.6% had positive scores for depression with 2.2% made up of those who had no formal education, 21.6% those who had primary school level of education, 30.9% those who had secondary school education, 23.7% those with a mid-level college education and 2.2% were those who had a university education.

Analyzing by religious affiliation, Catholics made up 25.2%, Protestants 51.8%, Muslims and those of other religious affiliations not provided for in this study had 1.4%, and atheists 0.7%. In the response to the question of whether a respondent had a trusted person to talk to, those who responded "Yes" and had positive symptomatology for depression were 46.8% while those who responded "No" and had positive symptomatology for depression were 33.8%.

When analyzed on the basis of occupation, those not employed made up the highest percentage (35.3%), those in informal employment were 33.8%, those in formal employment 10.8%, while those with another occupational status other than those provided for in the study were the fewest (0.7%).

DISCUSSION

There exists a pool of data and a wide spectrum of data on sexual violence globally. Its effect on survivors of sexual violence includes PTSD and depression. The prevalence of PTSD and depression among survivors of sexual violence in this study was 71.2% and 80.6% respectively. The prevalence of PTSD at 71.2% was considerably lower than another study in Kenya by Nyaga (2010) which reported a PTSD prevalence of 90.4% among SV survivors during the 2007/2008 post-election violence.

This may be explained by fewer traumatic experiences for the women in this study compared to those who were not only survivors of sexual violence but inter-tribal violent clashes as well. The survivors of post-election violence may have been exposed to other types of violence and were probably dislocated from their residences. The female SV survivors in this study remained within their locality and were able to obtain medical help and support within their locality. This may have contributed to a lower PTSD prevalence. The respondents in this study, though violated, were not internally displaced and may have been exposed to fewer stressors, this may explain lower prevalence of PTSD. In regards to depression, the prevalence is lower than that reported by Abraham et al., (2013) of 84.3% among a similar population while Nyaga (2010) reported lower depressive symptom prevalence at 70.8%. The depression prevalence of 80.6% reported in this study was within ranges reported by similar studies.

The study found that the prevalence of PTSD and depression was highest among respondents in the age bracket of 26 to 33 years at 34.6% and 37.4% respectively. The high PTSD and depression prevalence in this category may indicate that the women in this age group were either more vulnerable to sexual violence or more likely to develop PTSD and depression symptomatology after sexual violence than those in the other age ranges. A survey conducted on survivors of sexual

violence in South Africa where PTSD was highest among sexual violence survivors, the mean age was 27 years (Mgogi-Wbalo et al., 2017).

The analysis also found that PTSD was more prevalent among respondents who were single and those who were married at 20.9% each compared to their counterpart as analyzed by marital status. Those who are single may be more exposed to higher likelihood of exposure to multiple partners thus increased chances for sexual violence from different individuals, or may not have a partner's support post sexual violence and thus may be more likely to develop PTSD symptomatology. A significant positive relationship between PTSD and sexual violence within marriage has been reported (Bennice et al. 2003). Married women in sexually abusive relationships are at greater risk of developing PTSD symptomatology as a result of the continued sexual intercourse with their partners which acts as a source of frequent arousal and reactivity. This experience of continued arousal and reactivity may lead to avoidance of stimuli and hence PTSD.

When analyzed on the basis of their education in the present study, the prevalence of PTSD among the respondents who survived sexual violence among middle-level college graduates was at 33.8% compared to the other levels of education. This implied that PTSD was more prevalent among survivors with mid-level education or tertiary education compared to the rest in that category. This was indicative of higher likelihood of developing PTSD symptomatology. Sexual violence has been reported to be high among female students in higher education categories (Geidam et al., 2010).

When analyzed by religious affiliation, Protestants were found to have the prevalence of PTSD at 40.3% when compared to those of different faiths. The Protestants formed the bulk of the participants in this study; 85 respondents had PTSD. Relationship between religiosity and PTSD has been shown to be related to the increase or decrease in religious beliefs after a traumatic experience (Ter Kuile & Ehring, 2014) and the concept of God that a believer has, and how positive or negative it is after the trauma (Leo et al., 2021; Tran et al. 2012). It is therefore likely that among this population, Protestants, more than their counterparts had a decrease in their religious beliefs or developed a negative concept of God after the traumatic experience.

Posttraumatic stress disorder was also highly prevalent among unemployed survivors of sexual violence than the self-employed who survived sexual violence. Economic status of women who were sexually violated does seem to be a contributing factor to the development of PTSD. The financial freedom that comes with employment does seem to protect women who survive sexual violence. The findings of this study corroborated the findings of Kimerling et al. (2009) who reported that sexual violence was significantly associated with employment instability among women. Further, the same authors aver that the effects of sexual violence and PTSD symptoms were predictors of unemployment among women, concurring with the findings of Bryant-Davis et al. (2010) and Mgoqi-Mbalo et al. (2017). With these findings, it can be postulated that the economic and unemployment status of women make them more vulnerable to both sexual violence and the development of PTSD symptomatology.

Prevalence of depression was high among these women who had been sexually violated, being highest among those aged 26 to 33 years at 37.4%. This is lower than that reported by Smith et al. (2018) who found that 45% of women who were sexually violated at an average age of 28.7 years had developed major depressive symptoms. Other researchers have found lower prevalence such as Oshodi et al. (2020) who found a prevalence of 22.6% among female surviors of sexual violence within the same age group.

In the present study 20.8% of those cohabiting with an intimate partner showed depressive symptoms, followed closely by their single counterparts at 18.0% and those who were married at 17.2%. The current study agrees with literature as cohabiters generally report higher depression prevalence and levels than their married counterparts associated with a higher level of instability in their relationships (Brown, 2000; Brown et al., 2005). Studies have found beneficial effects of marriage against the development of mood disorders, where the marital relationship is a psychological and social resource that helps individuals better withstand adversity (Lamb et al., 2003). In comparison with the cohabiters and single respondents, married women had the lowest prevalence. It is therefore likely that in this study the women were in marriages that provided the necessary support in regard to the caring or buffering provided by marriage against adverse life events explaining the comparatively lower prevalence observed on the married. When the sexual violence happens within the context of marriage or a cohabiting relationship, the protective nature of the relationship changes to being a risk factor. The study by Cherlin et al. (2004) when comparing women who had been sexually violated, found that women who were cohabiting were more likely to develop depressive disorders than their counterparts, post exposure to sexual violence.

Single women had a comparatively high depression prevalence; this would point to the possibility of these women being more vulnerable to sexual violence from intimate or non-intimate partners due to their marital status. Another explanation for the high prevalence of depression among single women would be the lack of a supportive romantic relationship which has been reported to be protective against the development of mood disorders. Additionally, single people have been reported to be disregarded in regards to the development of psychological disorders when compared to those married and cohabiting (Van Hedel et al., 2018). Likewise, a relationship had been shown between being single and depressive symptoms while no relationship has been reported between being divorced or widowed and depressive symptoms (Grundstrom et al., 2021). When analyzed by religious affiliation, Protestants were found to have a prevalence of depression at 46.8% when compared to Catholics, Muslims, atheists, and those who did not belong to any faith listed. Higher religiosity has been associated with higher rates of depression though the connection between the two remains controversial. Protestants have been reported to be highly religious in comparison to other religious groups and this could be a possible reason for the high prevalence of depression within this population (Tix et al., 2013). Religious belief and not religious behavior have been associated with lower levels of depression in studies beyond demographic characteristics. It is therefore likely that among Protestants in this sample, religious belief was low

while religious behavior was high. This would explain the high prevalence of depression among Protestants within the sample.

This current study reported that 40.3% of the women who were not employed had depressive symptoms. This high prevalence could be explained either by higher level of exposure to sexual violence when compared to those in an employment or higher likelihood of developing depression among the unemployed. To a large extent, studies report a higher prevalence than that reported in this current study. One such study is that carried out by Abrahams which. (2013) that reported that 84.3% of the unemployed and low economic respondents had high levels of depressive symptoms. In addition, the same study reported a greater likelihood of depression among survivors of sexual violence who are unemployed. Women are at an increased risk of victimization and elevated violation when their level of income is meager (West, 2019; Weissman et al., 2020).

CONCLUSION

The present research demonstrated the influence of socio-demographic characteristics on the prevalence of PTSD and Depression. The demographics indicated that those aged between 26 to 33 years had higher prevalence of both PTSD and depression. Indicating that younger women were more likely to develop either disorder post sexual violence or more of women within this age group sought medical help after sexual violence. The study showed that those who were single and those who were married had higher PTSD prevalence, while those who were cohabiting had higher depression prevalence. Those survivors of sexual violence who were unemployed had a higher prevalence of both PTSD and depression when compared to their counterparts. In regards to religion, Protestants had a high prevalence of both PTSD and depression when compared to other religious affiliations.

This study recommends that there is need to strengthen the already existing centers for sexual violence survivors in Kenya. The findings should be viewed as a tool or resource for researchers to advance their knowledge in this area of research in Kenya. Individuals, practitioners and organizations offering services related to mental health issues could also benefit from this study in diverse ways. Finally, the Government of Kenya could find this report useful in the provision of trauma-focused care in primary health care services.

Based on the findings of this study, recommendations are made; first, premarital counseling should be enhanced to create awareness in women about the effects of marital sexual violence and the need to seek help before it takes its toll on their mental health, additionally, assessment and treatment of PTSD and depression to avoid arousal and avoidance of stimuli due to persistent stimuli should be incorporated into premarital counseling. Secondly, well-established psychotherapy services in all government institutions should offer therapy to survivors of sexual violence in a more structured and timely manner. Thirdly, Government should sensitize the citizens through campaigns on the consequences of sexual violence on women. Fourth, Health

facilities should proactively screen for PTSD and depression as part of triage and as a preventative measure and lastly, primary health care should offer trauma-focused care in trauma-informed settings in order not to re-traumatize the survivors of sexual violence

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ACTS OF VIOLENCE EXPERIENCED BY SURVIVORS OF INTIMATE PARTNER VIOLENCE IN KENYA: GENDERED DIFFERENCES

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ASTRACT: *Intimate Partner Violence (IPV) is a global human rights violation and a significant public health issue. This study aimed to find out the gender differences in experienced acts of IPV among survivors in Nyeri County, Kenya. The study adopted a cross-sectional survey design with a mixed-methods approach and used purposive sampling to select the hospital. The sample size was 147 respondents drawn from a population of 266 survivors of IPV seeking services at the GVRC. Questionnaires and a focus group discussion schedule were used to collect data which was then analyzed using the Statistical Package for Social Scientists (SPSS v. 25.0). The acts of IPV experienced by survivors included slapping, pushing, choking, or punching (90.6%), coercion to have sex (56.41%), threatened with a weapon(88.89%), the likelihood of physical hurt(88.9%) and yelling or being screamed at (97.44%). Further analysis indicated that there was a significant association between gender of respondent and acts of violence, slapping, pushing, chocking or punching (X^2=2.10, p=0.043), coercion to have sex (X^2=1.058, p=0.03), the likelihood of physical hurt (X^2=1.01, p=0.019). The study recommends the need for recognition, design, and implementation of appropriate intervention programs for all survivors regardless of gender.*

Keywords: *Intimate Partner Violence, Violence act, Gender violence, gendered differences, Intimate Partner Violence Survivors*

INTRODUCTION
Intimate Partner Violence (IPV) is a term used to describe abuse between two people who are engaged in a romantic currently or have ever been in an intimate union, including dating, cohabiting, and marital relationships (CDC, 2020; Kigaya, 2022). IPV encompasses sexual, physical, and psychological/emotional abuse (Australian Institute of Health and Welfare [AIHW], 2018, 2021; Opanasenko et al., 2021).

Diverse literature on IPV mentions that despite global and regional policies, protocols, and laws, IPV has remained considerably high globally and is a public health concern (Haberland et al., 2020; Kenya Demographic Health Survey [KDHS], 2014). The condition is direr in a majority of African countries (Fawole et al., 2019; KDHS, 2014; Sere et al., 2021), a silent social calamity that takes place daily with impunity behind closed doors in most homes worldwide (Iverson et al., 2021; Ondicho, 2018). It has been reported that approximately one in every four women and one in every nine men have had an experience with IPV in the US (CDC, 2020; Kigaya, 2022). Further, records show that one in every three women in countries which are a member of the World Health

Organization (WHO, 2014). Studies conducted on male IPV survivors are few compared to studies on women IPV survivors (Kigaya, 2022; McGlinchey et al., 2020). The scarcity of studies on male survivors of IPV is more pronounced in patriarchal societies like Kenya, where cases are underreported (Kigaya, 2021).

The rise in the prevalence rate of IPV, with adverse health effects, social and cultures that accept violence, and the potential to prevent its recurrence have necessitated much attention worldwide (Fawole et al., 2019; Opanasenko et al., 2021). In Nyeri County, Kenya, it has been reported in the recent past that IPV is flourishing. A very recent multicultural rapid assessment on Gender-Based Violence (GBV) carried out by the Center for Rights Education and Awareness (CREAW) confirms this supposition, revealing that women take the largest brunt of partner violence (CREAW, 2019). Results of studies conducted are proof that not only is IPV a fear-provoking issue, but the survivors are at risk of serious injuries as well as death (Iverson et al., 2021; CREAW, 2019). Iverson et al. (2021) have mentioned that IPV requires attention not only in and of itself but also because of its adverse influence on the survivors' overall health. These claims indicate that despite several previous studies on IPV, more studies are required.

In most previous studies, females have been on the receiving end as survivors, whereas males have been indicated as the perpetrators (KDHS, 2014; Ondicho, 2018). However, research recently indicates that IPV is far more complex and multidimensional; women, too, have been battering their husbands at largely symmetrical rates (Fernández-Montalvo et al., 2020; Sita & Dear, 2021). For example, gender symmetry theory postulates that females are equally aggressive compared to males (Adebayo, 2014; Fernández-Montalvo et al., 2020; McGlinchey et al., 2020); this appears to apply to some forms of IPV but not others (Fernández-Montalvo et al., 2020). Some studies have indicated that females commit equal (KDH, 2014) or even more acts of physical IPV (Sita & Dear, 2021) toward their spouses, thus supporting the gender symmetry theory. A study carried out by a Demographic Health Survey on survivors of IPV in Kenya revealed almost a symmetrical rate between females and males at 45% vs 44% (KDH, 2014).

On the other hand, feminist theory accounts for IPV as a gendered issue. It is supported by studies that have found that relative to males, females encounter increased and severe acts of violence (Sita & Dear, 2021). Additionally, it has been indicated that law enforcement reports show that IPV perpetrators are men (Federation of Women Lawyers Kenya [FIDA], 2017; McGlinchey et al., 2020; US National Institute of Justice [NIJ], 2020). Theories related to gender have pointed out that cultural norms that back men's higher power in most interactions with females, including IPV, account for the higher prevalence rate of IPV against females (Kigaya, 2021).

Physical violence is often depicted as uniquely gendered delinquency (Clemons, 2021; O'Connor, 2020). Women survivors of IPV report a more considerable percentage of physical occurrences of abuse and severe forms of injuries (AIHW, 2018; Potter et al., 2021). A study by Hossain et al. (2020) found that of the total respondents, almost all (93%) experienced physical violence perpetrated by their spouses one year prior to the study. The effect of psychological/ emotional violence on the survivor has been indicated as the most deleterious (O'Connor, 2020; Pereira et al., 2020). This form of abuse traumatizes the survivor through actions, forcible manoeuvres, or threats of acts (Clemons, 2021; US NIJ, 2020). A study by Haberland et al. (2020) shows that women survivors of IPV report an increased encounter of psychological/emotional abuse perpetrated by their intimate partners. Sexual violence has been argued in various studies as a form of abuse encountered by survivors, with female survivors of IPV experiencing this form of

violence at an elevated rate than male survivors of IPV (KDHS, 2014; Hossain et al., 2021). A demographic survey study in Kenya reveals that 6 % of males and 14% of females aged 15-49 reported having experienced sexual violence at least once in their lifespan (KDHS, 2014). A study in Kenya mentions that women are more prone to use words against their spouses, especially when they feel they lack control and use words to get even or hurt their male partners (Maingi, 2016). The debate between feminist and gender symmetry theories in gender differences in IPV victimization and perpetration has widespread implications (Adebayo, 2014). Findings from research conducted on each side have been used to influence decisions and policy. For instance, In Kenya, maendeleo ya wanawake ("Progress for women") has made attempts for victim services for female survivors over an extensive period (FIDA, 2017). Equally, maendeleo ya wanaume ("Progress for men") has claimed that men are likely to be survivors just like women (Adebayo, 2014). Globally, such advocacy groups have promoted gender neutrality in IPV funding and policy and claim that either gender is equally likely to be abused, based on gender symmetry theory (Adebayo, 2014). Based on this background, the current study intended to examine the acts of violence experienced by survivors of IPV in Nyeri County, Kenya.

METHODOLOGY

The current study was conducted at the Gender Violence Recovery Centre (GVRC) in Nyeri Provincial General Hospital, Nyeri County, Kenya. The study used a cross-sectional study design with a mixed-methods approach (qualitative and quantitative methods) to investigate and analyze the variables under study. The study used purposive sampling to identify the study site and the survivors of IPV. The frequent media reports informed the choice of the study site for cases of spousal victimization to IPV in Nyeri County. This situation justified the need for further probing through a scientific investigation.

The sample comprised 147 survivors of IPV men and women seeking services at the GVRC, aged $\geq$ 18 years, involvement in a heterosexual intimate relationship of at least twelve months, a survivor's commission of at least one act of violence from an intimate partner within the past twelve months. One hundred and seventeen participants filled out the study questionnaire, and 30 of the respondents participated in the focus group discussions. Men constituted 39.46 %, and women 60.54 % of the sample.

Yamane's (1967) formula was used to compute the representative sample from the study population of 266.

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

Where: n = Sample size
N = Population size
e = margin of error at 5%

By substituting for population size (N) and margin of error (e), the sample size that is representative in the current study is given hence;

$$n = \frac{266}{1 + 266(0.05)^2}$$

n =   147

The data collection instrument was a self-administered closed-ended survey questionnaire. The assessment tool used was the George Washington University Universal Violence Prevention Screening Protocol ([UVPSP]. This tool is a revised and validated scale designed to assess the violent acts experienced by IPV survivors within the previous year and the previous month (Fawole et al., 2019). Several varied questions on demographic variables, capturing, among other variables, age, gender, ethnicity, education, religion, employment/occupation, number of children with previous and current partners, and period of relationship with current and past partners. One focus group schedule was used for all the six groups comprising five members each.

Data were analyzed using the IBM Statistical Package for Social Sciences (SPSS) Version 25. The demographic variables in the study were analyzed and presented using frequency distributions. Descriptive statistics (frequencies and percentages) were calculated on the mean scores of the various forms of IPV. Additionally, prevalence rates were determined based on the total percentage of female and male survivors reporting each form of abuse. Data from the focus group discussions were transcribed, coded, and analyzed thematically.

Ethical approval was sought from the following institutions: the Internal Review Board (IRB) of the United States International Africa (USIU), the National Commission for Science and Technology (NACOSTI), Ministry of Education and Ministry of Health (Nyeri County). Gatekeeper's permission to access the site was also obtained. The study respondents signed informed consent forms before participating in the study.

RESULTS

Demographic characteristics
In terms of gender, women constituted 60.54 % and men 39.46 % of the sample, with a mean age of 35.1 (±0.9)

Acts of IPV experienced by the survivors

As shown in Table 2, the UVPSP assessment tool containing five items was used. The respondents were supposed to indicate whether the violent acts in the items had happened to them in the previous twelve months and the previous month, respectively.

Table 2

Acts of Intimate Partner Violence

		Last 12 months (%)	In the last month (%)
A	Slapped, kicked, pushed, choked, or punched you?	**106 (90.6%)**	**75 (70.75%)**
B	Forced or coerced you to have sex?	**66 (56.41%)**	**41 (35.04%)**
C	Threatened you with a knife or gun to scare or hurt you	**94 (80.34%)**	**74 (63.25%)**
D	Made you afraid that you could be physically hurt?	**104 (88.89%)**	**64 (54.70%)**
E	Repeatedly used words, yelled, or screamed in a way that frightened you, threatened you, put you down, or made you feel rejected?	**114 (97.44%)**	**89 (76.07%)**

These findings were recapped during the focus group discussions. Below are two excerpts from the respondents shared during the discussions.

> In one of the episodes, my partner was abusing me in public, kicking me all over my body, pulling my hair, twisting my arm, and stuffing cloth in my mouth to stop me from screaming, and calling for help. The accusation was that I was sleeping with the male staff workers in the office. Two men came to the scene and just stood there. One man started to cheer and told me that I deserved the beating. He continued to tell my partner that he too has been teaching his philandering wife how NOT to play around with every man (FGD 1, 2022)

> I could never have imagined that my wife could batter me. When we started living together, we were best buddies. I was employed in a bank. A few years down the line, I was retrenched following need for staff cut in the office. Since the loss of income, I have been to hell and back. My wife is gigantic; she punches me so hard more so when I am drunk. One day, she threw my clothes out of our rented house in the presence of neighbors and our children. I end up going to my drinking buddies, to seek solace. . I have not found a permanent job since retrenchment. She says am stupid. I am terrified of her (FGD, 2022)

Association between Gender and acts of IPV
The researcher conducted a chi-test to establish the correlation between gender and acts of IPV, as shown in Table 3.

Table 2
Association between Gender and Acts of IPV

			Has your partner chocked you		Chi-Square
			N0	Yes	
Gender of the respondent	Male		24 20.5%	24 20.5%	X²=2.01(0.043)

					Chi-Square
	Female		32	37	
			27.4%	31.6%	
Total			56	61	
			47.9%	52.1%	

			Has your partner made you perform sex acts you did not want to perform?		Chi-Square
			N0	Yes	
Gender of the respondent	Male		27	21	
			23.1%	17.9%	
	Female		37	32	X²=1.058(0.03)
			31.6%	27.4%	
Total			64	53	
			54.7%	45.3%	

			Threatened you with a knife or gun to scare or hurt you		
			No	Yes	
Gender of the respondent	Male		8	40	
			6.8% % 54		X²=2.32(0.43)
	Female		15		
			12.8%	46.2%	
Total			23	94	
			19.7%	80.3%	

			Made you afraid that you could be physically hurt?		
			No	Yes	
Gender of the respondent	Male		9	39	
			7.7%	33.3%	
	Female		4	65	X²=1.01(0.019)
			3.4% .6% 104		
Total			13		
			11.1%	88.9%	

			Repeatedly used words, yelled, or screamed in a way that frightened you, threatened you, put you down, or made you feel rejected.		
			No	Yes	
Gender of the respondent	Male		10	37	
			8.8%	32.5%	
	Female		15	52	
			13.2%	45.6%	X²=0.058(0.53)
Total			25	89	

As shown om Table 3, 20.5% of males and 31.6% of females reported that their partners had choked them; 17.9% of males and 27.4% of females reported that their partners had abused them sexually; 34.2% of males and 46.2% of females reported that their partners had threatened them with a knife; 33.3% of males and 55.6% of women reported that they had received threats of physical harm from their partners, and 32.5% of males and 45.6% of females reported that their partners had verbally abused them.

DISCUSSION

Findings of the current study indicate that the most frequent act of IPV encountered in the previous year and the previous month was being repeatedly yelled at or screamed at frighteningly, being put down, and being rejected with 97.44% and 76.07%, in that order. The participants reported that the second most occurring act of IPV was being slapped, kicked, pushed, choked, or punched, with 90.6% and 70.75% in the previous year and previous month, in that order. The third most frequent act of IPV experienced by the respondents was being made afraid that one could be physically hurt, at a rate of 88.89% in the previous year and 54.7% in the previous month. Further, findings indicate that 80.34% of the participants were threatened with a knife or gun to make them feel scared or hurt in the previous year and 63.25% in the previous month. The least occurring act of IPV experienced by the survivors was being coerced or forced to have sex.

Further results from the focus groups on acts of IPV showed that IPV was prevalent across Nyeri County. It is a concern cutting across all social and economic boundaries. All the participants constantly described their IPV experiences as painful and emotional experiences. Social statuses, economic levels, and education attainment determined the survivors' understanding of IPV and the narratives of their experiences with IPV. However, all the participants reported that it was a bizarre encounter. Participants provided numerous explanations of the type of abuse encountered.

On the association between gender and IPV, the results indicate that female survivors suffered a higher percentage of violence episodes than male participants. The findings showed a significant relationship between gender and being choked. It was found that the number of female survivors who had been threatened to be choked was more than the number of male survivors, $X^2=2.01(0.043)$. The findings also showed a significant association between gender and coercion into sex, $X^2=1.058(0.03)$. It was found that the female survivors were more coerced into sex than the male survivors.

It was noted that female survivors suffered from this act of IPV more than male survivors. Further, It was found that there was a significant association between gender and being afraid that one could be physically hurt, $X^2=1.01(0.019)$. These results, together with reports of an experience of more severe injuries, were echoed in the FGDs with female survivors.

The evidence from various studies regarding gender differences in IPV experiences is mixed. Some studies mention gender symmetry; others mention that females experience more acts of IPV, whereas others cite men as being at risk. From the current study's findings, it is clear that both men

and women experience IPV and its consequences. However, men experience lower rates of injuries as a result of IPV. These results indicate that male survivors experience fewer cases of physical violence and more psychological/emotional abuse. This claim is affirmed in a study by Ongeti et al. (2013) at a GVRC of Nairobi Women's Hospital (NWH) in Nairobi, which revealed that women experienced violence nine times more than male survivors. For the female survivors of IPV, the experience is more physical and sexual. This finding is echoed in the results of recent studies conducted by Depraetere et al. (2020) and Maingi (2016). This claim has further been affirmed in the results of a very recent multicultural rapid assessment on Gender-Based Violence (GBV) carried out by the (CREAW) which revealed that women take the largest brunt of partner violence (CREAW, 2019). Further, these findings are comparable to the study by Ongeti et al. (2013), which indicates that females suffered more sexual assault than males. Finally, this claim has been affirmed in studies by Pereira et al. (2020) and Sere et al. (2021).

On the other hand, the low prevalence and lesser severity reported by male survivors could be attributed to underreporting by male survivors due to associated shame and fear that result from abuse, as indicated in similar studies by other authors such as Depraetere et al. (2020), and O'Connor (2020). This paper argues that power and abuse of power by spouses in intimate unions is the central issue that accounts for IPV occurrences. The Duluth model proposed this argument almost three decades ago (Pence & Paymar, 1993). Gender, therefore, serves as a proxy for power.

CONCLUSION

The study concluded that both genders experience acts of IPV. However, women suffer more IPV experiences compared to men. There is a need, therefore, for continued effort at the government level to promote recognition and acceptance of IPV as a public health issue amongst both genders. Recognizing the different forms of abuse with diverse aetiologies and, therefore, differential treatment approaches can advance our understanding of IPV, its impact on survivors, and appropriate preventive and supportive measures. At the same time, knowledge gathered from this research can strengthen human civil rights to reform civil and criminal legal frameworks majoring on IPV, raising awareness to intensify media and advocacy campaigns about IPV and existing legislation to implement such legislation.

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