



Learning Environments and Pupils' Participation in Primary Education in Nairobi Urban Slums: Implications for Sustainable Development

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ABSTRACT

In order to achieve economic sustainability, every country must invest significantly in quality education for boys and girls from the basic levels. Key inputs of quality education include teachers, physical facilities and resources; and gender-sensitive environments that are healthy, safe, and protective. Quality education is an empowering tool through which individuals gain sufficient academic qualifications that can lead to gainful employment or self-employment at a later stage. Such education augments people's understanding of themselves and the world improves the quality of their lives and leads to wide-ranging social benefits to individuals and society. While learning can take place anywhere, positive learning outcomes commonly pursued by educational systems happen in quality learning environments. In this paper, learning environments are contextualised in terms of physical and psychosocial essentials. The paper examines how learning environments facilitate or obstruct children's learning thereby contributing to their empowerment or marginalisation. The paper is based on qualitative case studies of four selected primary schools in Nairobi urban slums. A sample of 220 informants including 189 children and 31 adults were interviewed individually or in groups. The study utilised observations, interviews, Focus Group Discussions (FGDs), and mapping methods to collect data. The findings revealed that only two schools had physical elements conducive for girls and boys to learn. Child abuse was rife in the schools; some of the school premises were not only insecure but a health hazard to the boys and girls. The paper also discusses how the

home and community contexts were a threat to girls learning. The study concludes that learning environments, to a large extent, were an obstacle to girls' access, retention and achievement of good learning outcomes that are critical for improving their life chances. The study recommends inclusion of gender responsive pedagogy in teacher coaching and alternative methods of instilling discipline.

Key words: quality education, empowerment, marginalisation, participation, physical and psychosocial essentials

INTRODUCTION

Provision of quality education is the cornerstone to improving people's lives and sustainable development. Globally, consistent efforts have been made towards increasing access to education at all levels and increasing enrolment rates in schools especially for women and girls. In Kenya, national educational statistics on enrolment indicate a near gender parity (51% boys and 49% girls) at the primary school level. The Free Primary Education Programme (FPE) introduced in 2003 - for the fourth time in the history of the country enabled many more children particularly from disadvantaged backgrounds to enjoy their right to education. However, gender disparities still persist in some marginalised regions especially in the Arid and Semi-Arid Areas, and in urban slums tilting negatively against the female gender (Republic of Kenya, 2014). Further, it's noteworthy that nearly half of the children residing in urban slums in Kenya do not have access to free primary education due to lack of public institutions. A study by Ngware et.al, (2013) on Quality and Access to Education in Urban Informal Settlements in Kenya, indicated that 47% of children in urban slums across the country attended Alternative Provision of Basic Education and Training (APBET) institutions which are normally low-fee private schools due to the limited

number of public primary schools in urban slums. This means most of the poor in the urban slums do not benefit from FPE government subsidies - further exacerbating the inequality between the poor living in urban slums and their well-off counterparts.

The significant role of education in both personal wellbeing and national socio-economic development is indisputable as articulated in a number of policy documents in Kenya. Sessional Paper No. 1 of 2005 on a policy framework for Educational Training and Research commits the government to providing 'every Kenyan with basic quality education' (RoK, 2004:7). Kenya Vision 2030 whose main goal is provision of 'a globally competitive and prosperous Kenya' reiterates the essence of quality education that is 'invested in people' as anchored in its social pillar. It explicitly calls for exceptional provisions for Kenyans with from marginalised communities (RoK, 2007).

Further, the Millennium Development Goals (MDGs), Education for All (EFA), Post 2015 Education targets, the Sessional Paper No. 14 of 2012 on Reforming Education and Training and the Basic Education Act (2013) underscore the need to provide quality education. The Constitution of Kenya (2010) provides for the right to free, compulsory and quality education for every child. It also requires the state to take affirmative action so that marginalised communities access educational opportunities. In this regard, the provisions in the constitution bring with it the moral obligation for the state to ensure that children do not only access school, are retained in school but also exit school having achieved meaningful education for improved life chances. The Sustainable Development Goals with specific focus on goal 4 and 5 underscore the importance of inclusive, equitable, quality basic education and gender equality

The commitment by the Kenyan government to provide formal education is evidenced by the heavy investments into education, 6.4% of GDP. Despite the enormous investments in education, standardized learning assessments in literacy and numeracy in Kenya indicates that many of the children are not learning at their expected levels especially among the marginalised groups (Uwezo, 2010, 2011, 2012; 2016, SACMEQ, 2011). While it is agreed that learning can take place anywhere, substantial body of existing evidence shows a positive relationship between learning environments and pupils learning outcomes (Hussain, et al. 2012). In this paper, learning achievements have been contextualised

in terms of learner's attainment on standardised tests. A supportive learning environment in which all learners have equal opportunity to participate in the learning process is key to achievement of improved learning outcomes. Consequently, it is for this reason that this paper explores the effects of basic dimensions of quality education that include physical facilities and resources, gender-sensitive environments that are healthy, safe, and protective to enhance provision of quality education in the Nairobi urban slums. This paper is based on the first qualitative research from *Wasichana Wote Wasome* (Let all Girls Learn) project. *Wasichana Wote Wasome* (WWW) is a Girl Education Challenge (GEC) project funded by DFID under Step Change Window. The study entitled 'Education, Empowerment and Marginalisation: Do schools empower girls?' sought to better understand girls' pathways and trajectories into empowering and non-empowering practices and behaviours in and through education that have a bearing to girls learning outcomes. This paper, examines few school quality inputs (that are internationally accepted indicators of educational quality) in relation to their influence on pupils' achievement. These inputs are physical facilities and resources, and gender-sensitive environments that are healthy, safe, and protective.

Physical facilities are essentially meant to provide pupils with a comfortable learning environment to engage and learn. Physical facilities in a learning institution include but are not limited to school buildings, classrooms, libraries, toilet facilities, playing fields and recreational equipment; and learning materials that are critical to effective learning processes Ajayi and Ayodele (2001). Altbach (1998) opined that adequate facilities are essential for academic work while Buckley, Schneider and Shang (2004), point out that availability and appropriate use of school facilities has a bearing on effective teaching which in turn has positive affects pupils academic achievements. This evidence is corroborated by Chandan (1999), who argued that provision of adequate and quality physical facilities are key to effective teaching. On the hand Hallak (1990), observed that the quality, appropriateness and adequacy of school facilities contribute to performance in the school system. Equally, Ademilua (2000) noted that inadequate resources have contributed to student's dismal academic performance. In addition, UNESCO, (2005) observes that pupils' access to instructional

materials is an important factor in what and how much they learn. Thus, a substantial body of research indicates that school facilities and resource materials have a bearing on teaching and learning that impacts on pupil's achievement. Consequently, Hussain, et al. (2012) concludes that availability of educational facilities has a close link with the academic achievement.

The available evidence from several studies indicates a favourable classroom and the surrounding environment is critical to learning even though many of these studies are based on western countries. Fraser (1994; 1998a) found students learning is significantly influence by quality classroom as cited by Dorman 2002 in the article titled 'Classroom environment research: Progress and possibilities'. According to Fraser, a classroom is conducive to learning if the room is very clean, well-lighted and ventilated, chairs are good and properly arranged, students are cooperating with each other while the teacher is gender sensitive and respect students. Katz (2011) defines a child friendly school environment as one where the teacher is friendly, and the health, the safety and the needs of the boys and girls are adequately met. On the other hand, Alina (2010) opines that a child friendly school environment should provide a comprehensive quality framework for teaching facilities and community environment in support of children's right to health, protection and development to their fullest potential. The CFS approach to education promises all children the right to schools that are safe and protective, that offer clean drinking water, hand-washing facilities and clean, safe toilets. 'In child-friendly schools, children learn about hygiene and how to protect themselves and their families from infectious diseases' (UNICEF, 2009).

METHODOLOGY

This paper adapted the ethnographic case study approach. Researchers immersed themselves in the sample schools for one week. This gave the researchers an opportunity to freely interact with the participants through informal conversations with pupils and teachers, interviewing them, engaging them in activities such as mapping; and conducting unstructured observations of school community interactions and activities in a range of contexts such a games time, break time and morning assembly. Data generated through the multi methods of data collection enabled the researchers

to better understand practices and behaviours that affect girls' education.

Sampling Sites and Study Locale

Study Locale

The study was carried out in Nairobi urban slums. This paper is based on the four schools that are situated in Nairobi urban slums which are home to three-quarters of the city's population of 3,000,000 people (KBS, 2009). The slums occupy one-eighth of the land space in Nairobi. According to UNHABITAT,(2008), 60% of Nairobi population lives in slum like settlements with rapid urbanization of poverty into an already strained City, Kenya urban population projected to double by the year 2050, almost 30% of population is aged below 14 years and in need of pre-primary and primary education and over 60% of the children in Nairobi slums attend APBETs and miss out from publicly financed critical programs due to the limited growth in the provision of social services such as the number of schools, health facilities, infrastructure, and housing. This means that slums are highly congested and are characterised by unconventional houses, poor infrastructure, poor livelihood opportunities and inadequate social amenities. Even through there are 225 public primary schools in Nairobi, the number of public schools in the slums is dismal compared to the population of school age children. Ngware et.al (2013) has shown that over 60% of Nairobi's more than half a million children from low income earners attend low-fee private schools or Alternative Provision of Basic Education and Training (APBET) institutions and yet these are families that live on less than US\$1 a day. It is against this backdrop that case studies of four mixed primary schools (one public, and three APBET) from Nairobi urban slums were carried out so as examine how girls' experiences of schooling and living in the slums empowered or marginalised them.

School Sites

The four schools herein referred to as Nairobi I, Nairobi II, Nairobi III and Nairobi IV were drawn from the urban slums of Nairobi City County. Existence of "successful" school clubs was the main criteria used in the selection of these schools. Nairobi I was in Kangemi Ward of Westlands Constituency while Nairobi II was in Mathare Mlango Kubwa Ward, of Starehe Constituency. Likewise, Nairobi III is situated in Kawangware

ward in Dagoretti Constituency whereas, Nairobi IV was in Korogocho in Kariobangi North ward of Kasarani constituency.

Informants

Key informants, interviewees and discussants were selected through purposive sampling and snowballing. The study targeted two categories of girls as key informants: i) girls in leadership positions and ii) those who had dropped out. Girls from classes 5-8 were selected to participate in single and mixed Gender FGDs. Focus group discussion participants were selected on the basis of active participation in the school clubs. On the other hand, boys were selected based on their membership in school clubs and leadership positions to participate in interviews and FGDs (both single and mixed gender) and in mapping exercises. Supplementary interviews were conducted with male and female teachers and parents. In total, 220 informants (189 children and 31 adults) were interviewed both individually and in groups as shown in Table 1.1. However, it should be noted that the actual number of children who formed the sample for the study was much more only that the exact number of girls and boys who played part in the Whole Class Activities (mapping out safe and unsafe spaces) was regrettably not recorded and is one of the limitation of the study.

Table 1. 1: Sample Grid by Research Subjects, Gender and Methods

	Children		Adults		Total
	Girls	Boys	Women	Men	
Key Informant Interviewing	44	0	0	0	44
Supplementary Interviewing	29	6	20	11	66
FGD	54	56	0	0	110
TOTAL	127	62	20	11	220
	189		31		220

The key informants were girls (girls in leadership positions in schools and school dropouts, girls who were active participants in clubs, and co-curricular activities). Leadership positions membership in school clubs and active participation in co-curricular activities such as sports were considered a good rationale to select participants because by virtue of their positions, they could give their insights on enabling learning environments conducive for girls' empowerment. Supplementary data was also collected from boys in upper primary. The selection of boys was based on their membership in the school clubs and leadership positions. Other secondary informants included the Head teachers; male and

female teachers and parents, some of whom were in school management committee (SMC).

Data Collection Methods

The study used observations, interviews and selected Participatory Learning and Action (PLA) method such a mapping activities to collect the field data.

Data Recording, Transcription and Analysis

Data was collected through note taking in addition to use of audio recorders and cameras. Data from interviews, FGDs, Classroom observations, playground observation, and assembly observations was transcribe and analysed based on themes. Data transcription and analysis was continuous as it went hand in hand with data collection processes.

RESULTS AND DISCUSSIONS

Quality learning environments

While it is generally accepted that learning can take place anywhere, positive learning outcomes commonly pursued by educational systems happen in quality learning environments that are healthy, safe, protective, gender-sensitive; and provide adequate facilities and resources.

General school environments

Overall, observation data indicated that the general outlook of the schools visited was dull, dusty and unattractive. There were no flowers or trees in the school compounds to give that serene environment for learning. It was only Nairobi I which had a few poorly maintained trees. In addition, the four schools were either poorly fenced or without a fence at all like in the case of Nairobi III and Nairobi IV. Even though the schools were fenced using barbed wire, or wood fence security concerns were raised as strangers still accessed the school compounds illegally. An incidence was reported that a watchman was killed in 2014 and food stuff stolen from the school store (Nairobi I, Mixed FGD, 16 July 2014). On the other hand, in Nairobi II strangers freely accessed the school premises through one of the school gate which was unmanned as the school had only one watchman but two gates. Reportedly, this was how drugs and other banned items were smuggled into the school creating unhealthy learning environment.

School observation data also indicated that two

schools (Nairobi I and Nairobi II) were erected on some fairly sufficient piece of land. This was not surprising given that Nairobi I was dubbed a community school with relatively constant funding from some development partners while Nairobi II was a public primary school funded by the government. Even though the two schools had playing fields, Nairobi I playing field was inadequate to cater for a huge population of more than 800 pupils. On the other hand the playing field in Nairobi II was too dusty and hence not favourable for outdoor activities. In the words of the boys and girls, the dusty compound was a health hazard, 'during dry seasons the compound is too dusty- we get common cold and those with chest condition get more affected and cough a lot'. The pupils also lamented that the school compound gets flooded during rainy seasons, thus it was constantly a health as well as a safety issue" (Mixed FGD, 18 July 2014). In contrast, Nairobi III and IV did not have any playground at all as they were sandwiched between residential shanties. During break time, boys and girls in Nairobi IV would loiter along the narrow corridor while in Nairobi II pupils would go out to play at the roadside outside the gate which exposed them to risks of accidents from motorcycles and cars plying that road.

Quality of school facilities and resource materials

Adequacy of physical learning environments in terms of school buildings, classroom, library, sanitation, and playing fields and resource materials essential for learning differed from one school to the other. Nairobi I and Nairobi II schools seemed fairly endowed with essential classroom facilities. The desks were equally appropriate and were mainly shared by three pupils of mixed gender. On the contrary, the furniture in Nairobi III and Nairobi IV classrooms was not only grossly inadequate but in pathetic state to support any meaningful learning. The desks in Nairobi III for instance and tended to be too small for the children to sit on comfortably. On average, five children used a desk meant for three in the two schools. The classrooms were semi-permanent - made of old and rusty iron sheets. The partitioning of the classrooms was made of severely worn out iron sheets such that in Nairobi III a pupil in either Standard Four or Standard Five could pass through the gaping holes in the partition to and fro each class unabated. The poor partitioning also meant noise from one class to another obstructed learning which may lead poor achievement. This finding corroborates available evidence indicating

that poor classroom acoustics can adversely affect learning environment for many students and that constant noise exposure can damage cognitive performance and functioning (Higgins et al, 2005).

In particular, the physical facilities in Nairobi III were grossly inadequate. The school was set up on a small piece of land—about a tenth of a hectare next to an open refuse collection point and market centre for plastics accessories, bones and scrap metals. Girls and boys described this site as unsafe and a health hazard. Further, they reported verbal and physical abuse meted out on them by the people selling items next to the school. This school had only seven tiny semi-permanent classrooms that could hardly accommodate the 170 total population of the school including the pre-school. This meant that nursery, pre-unit and class one pupils shared the same classroom as while classes two and three were also lumped together. The classrooms were generally congested leaving no room for the learners or the teachers to move around comfortably and was poorly ventilated. Myhrvold et al., (1996) study conducted at eight different European schools on more than 800 students found that increased carbon dioxide levels in classrooms due to poor ventilation decreased student performance on concentration tests and increased students' complaints of health problems as compared to classes with lower carbon dioxide levels. According to Fuller (1986) in Likoko, Mutsotso and Nasongo (2013), the quality and availability of school facilities experienced by a learner determines the quality of education. He further stressed that, the quality and quantity of school resources can affect the quality of education and students performance.

Although research evidence shows that well-resourced school libraries can have a positive impact on student achievement only Nairobi II had a school library. However, even though it was well stocked with some reference materials it was hardly accessible to the boys and girls as observed by the researcher:

The library was always under lock and key and for the whole week it was not used by any of the pupils. In addition, the in charge of the library rarely stayed in school for more than two hours. He was observed routinely to report to school at around 10 am and leave shortly thereafter. The reading materials were therefore not used by the pupils and they were hence very new in appearance.

Moreover, in regard the availability of resources materials such stationery and text books all the school were noted to have inadequate learning materials as they heavily relied on donors and well-wishers for supplies. Nevertheless, Nairobi I was better resourced in terms books courtesy of Free Primary Education (FPE) funding from the government. In contrast, other materials such as teaching aids which are needed in the teaching learning process were also grossly missing in the four schools. A study in Latin America, (cited in UNICEF, 2000) that included 50,000 students in grades three and four found that children from schools that lacked resource materials and library facilities were significantly more likely to demonstrate lower test scores and higher grade repetition than those whose schools were well equipped (Williams and Wavell 2001). This finding is supported by studies, carried out in Botswana, Nigeria and Papua New Guinea, Pennycuick, 1993 (cited in UNICEF, 2000).

Teacher classroom practices

Teachers play a key role in the teaching and learning processes. Hattie (2003) indicates that after family and social economic background, teacher student interactions are the greatest predictor of learning outcomes in standardised tests. As such boys and girls will achieve their full potential in environments where teachers recognise and address their differentiated individual needs. When teachers were asked how they treat boys and girls in learning, they were quick to point out that they ‘treat them the same’ by giving them equal opportunity to participate in the learning. Unfortunately, this is where the problems start because boys and girls are not the same, they have different needs and they also learn differently because they all possess diverse abilities and are therefore bound to demonstrate different learning outcomes.

Notably, classroom observations in Nairobi II revealed that teachers were giving equal opportunity to both boys and girls to participate in the learning process even though the quality of interaction was questionable as it was only limited to teacher initiated questions to the pupils which does not really support meaningful learning. However, the converse was the case in the other three schools (Nairobi I, III and Nairobi IV) teachers were noted to engage more boys than girls as they directed more questions to boys than girls. Further, the teachers observed teaching class 2 and 5 called on

boys more often, praised boys more frequently, and asked boys more thought-provoking questions. Boys were also called by their names while girls largely remained nameless which marginalised girls further because teachers’ gender-equitable treatment of girls and positive attitudes toward them are important and effective in responding to girls’ learning needs critical for improved learning achievement.

Additionally, the desks in all the four schools were arranged in the traditional usual rows. Higgins, et al (2005) noted that desk arrangement can affect students’ achievement and attention while Patton, et al (2001) found that majority (94%) of the K-3 teachers organised desks in semicircle or cluster to arrange the in their classrooms. The teachers explained that arrangement of sitting design in groups encouraged cooperative learning, built a sense of class community and made the best use of the space for optimal learning. Proper desk arrangement provides opportunities for learners to be enthusiastically engaged in learning process and creates the opportunity to work cooperatively with their colleagues for improved learning outcomes. Available research evidence indicates that sitting arrangements has a bearing on the learning process. This means that based on the traditional rows or columns sitting arrangements, pupils occupying the front rows are more attentive and likely to participate in the learning process than those seated at the back (Harvey and Kenyon (2013).

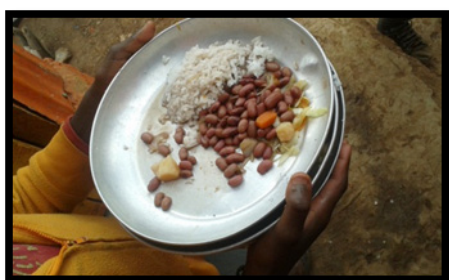
Furthermore, all teachers observed teaching class Two or Five Math or English lessons mainly used chalk and talk traditional methodologies and very limited resource materials. The text books and teaching aids were scarce and therefore class work was mainly written on the blackboards for the pupils to copy which limited learners active engagement with learning materials.

Feeding programme

All the four schools provided lunch for the children. Whereas lunch was free in three schools, parents in Nairobi IV had to foot the bill which was a major challenge to the economically poor parents or guardians. Consequently, many parents defaulted on lunch payment and hence the school had introduced meal cards to ensure that only those pupils who had paid accessed lunch. Discussions with the head teacher indicated that there were ^girls than boys whose parents did not pay for their

lunch implying a gender dimension that probably more parents were keen to pay for their sons lunch and not daughters. Moreover, more girls than boys were observed queuing to buy snacks such as chips, 'bhajia', smokies, boiled eggs from the food kiosks around the school. However, the study did not probe on these observations which is one of the limitations of the study.

Whereas observation at lunch break indicated that pupils in Nairobi II, were given generous servings of food that mainly consisted of rice and beans, green gram or any other plant protein this was not the case in Nairobi III where the food portions was very little lunch consisting of rice, beans, carrots and Irish potatoes as shown in the picture below.



A sample of lunch ration in Nairobi III

During the FGD girls explained that they were only served with adequate portions of food when sponsors visited the school. Research evidence shows provision of food is one of the factors that influence attendance and retention of pupils in schools in addition to improved learning outcomes. Research on primary education in rural India suggests that mid-day meals enhance school participation, especially among girls. One recent study estimates that the provision of a mid-day meal in the local school is associated with a 50 per cent reduction in the proportion of girls who are out of school. Dreze and Aparajita (2003) documents that, in a survey of 63 schools in Barmer district, Reetika Khara in India found that female enrolment at the primary level was 36 per cent higher in September 2002 than in September 2001 following the introduction of mid-day meals. In addition, a study in Jamaica examined 115 children aged 12–13 who were enrolled in three classes in a poor, rural school. One class was served the standard school meal at 0900 whereas the other two classes served as controls. The outcome variables included school achievement, attendance, and weight gain. After one semester, the class receiving the meal showed improved arithmetic scores and school attendance

compared with the control classes; however, they showed no weight gain. (Donald, 1998). Even though school lunch is key in improving attendance, retention and learning outcomes, lunch offered in one of the schools was grossly inadequate while in another school many parents were unable to pay for their children access the lunch.

Water and Sanitation

Water supply, sanitation and hygiene (WASH) are considered basic components in a school meant to provide a safe, healthy and conducive environment for learning (UNICEF, 2012). According to UNICEF, WASH in schools improves attendance, health and cognitive development, improves girls' participation, establishes positive hygiene behaviours, and lays a foundation for better WASH practices in families and communities. However, in the four schools visited water and sanitation facilities were grossly inadequate with only one school that provided sanitary pads to needy girls.

Water was a scarce commodity in three schools. There was no water for different uses like drinking, cooking, cleaning, and for use in the toilets. One school had water closets while the rest used pit latrines. From the observation it was noted that in Nairobi II pupils at lunch time went out of the school to fetch water for drinking hence coming late for the afternoon classes which has a negative impact on the teaching and learning process. Further, a single water tap serving Nairobi III and the surrounding community was deemed inadequate. Moreover, pupils were allegedly denied access to the tap water by the school management as pointed out by one of the girls:

Sometimes we even have to eat with dirty hands after coming from the toilet. If teacher Jane finds you using the tap water she beats you up and tells you to come with your own water from home.

Generally, the toilets were overstretched; there were no washrooms, adequate water supply and sanitary disposal bins to provide a conducive and health environment for learning especially for girls. Available data indicates that Nairobi III with a pupil population of 170 had only two toilets for sharing between boys and girls; While Nairobi IV with a huge population 710 pupils had only six toilets giving a mean of 1:118 toilet-pupil ratio. Notably, the toilets were commonly shared by boys and girls

as none of them were designated for any gender. Comparatively, the situation was not so bad in Nairobi I and II. In Nairobi I with a pupil population of 800 pupils had separate toilet for boys and girls. The toilet-boy ratio was 1:25 and toilet-girl ratio was 1:42. Whereas the toilet-boy ratio was within the recommended MoEST ratio of 1:35, the toilet-girl ratio was beyond the expected MoEST ratio of 1:25 girls. Hence there appeared to have been a gender bias in allocation of the available toilets in favour of boys. In addition, even though water supply in Nairobi I was regular, the hand washing facility was placed outside the toilets and there was no soap. Equally, there were no sanitary disposal bins and washrooms to support girls' menstrual management. Similarly, even though Nairobi II latrine to girls ratio stood at 1:25.5 approximate the standards stipulated by the Ministry of Education, (MoE) there was no water, washrooms and sanitary disposal bins. Besides, girls and boys toilets were only separated by a wall meaning that girls in particular did not have privacy. Furthermore, if toilets for boys and girls are not separate; this increases chances of sexual harassment. (Abrahams et.al. 2006; Leach, et.al, 2003).

Discussions with boys and girls from three schools observed that the toilets were rarely cleaned and as such, they were filthy, dirty, smelly and a health hazard (Nairobi Mixed FGD, 17 July 2014). This situation is therefore not conducive for learning; for the reason that learning, health and hygiene are closely related. Sick children will not attend school due WASH related health issues such as diarrhoea, worm infections and respiratory infections (Aiello,et.al, 2008) while such illnesses can significantly be reduced through improved WASH in schools.

Unsafe Places a Threat to Pupils' Welfare

Children cannot learn in unsafe places and hence creation of safe learning spaces cannot be overemphasised. Substantive body of evidence indicate that pupils are more encouraged to learn and exploit their full potential in schools that have a positive school climate. However, in the four schools visited boys and girls pointed out that felt unsafe in their schools and their neighbourhoods. Specifically, school environment was perceived unsafe because of bullying both physically and emotionally whereas the communities were unsafe because drugs, liquor and sex pests.

Physical abuse: The main perpetrators of physical

abuse were teachers and fellow pupils. Despite the Kenya government ban on caning (RoK, 2001) and other forms of physical punishment, there was rampant use of the corporal punishment in the four schools visited. In Nairobi II pupils interviewed gave graphic details of how they are beaten while in school. They reported being caned severely on their backs, made to remove their shoes so that they are caned on bare feet, on their buttocks, on their hands and generally all over the body in the name of correcting or keeping the child in the check. The conversation below illustrates the severe use of the cane in one of the schools:

***Moderator:** What are some of the challenges facing you in this school?*

***Boy 3:** Being caned on our buttocks while girls on their hands. And if you request to be beaten on the hands they add 3 extra canes.*

***Girl 4:** Sometimes you can be taken to the staffroom and be beaten by all the teachers*

***Boy 9:** Wah! I tell you we are canned so badly that sometimes we are told to remove shoes then caned on our barefoot which is very painful!*

***Girl 2:** Sometimes you are beaten until you get swollen. (Nairobi II Mixed group FGD, 17 July 2014).*

In Nairobi I, physical abuse was witnessed live by the research team. Reportedly, boys and girls were observed being caned on buttocks and sometimes on their hands. This observation was validated by a teacher and the head teacher even though they defended the use of cane. A female teacher argued that caning was necessary to discipline pupils while the head teacher owned up that even though caning was outlawed some teachers used it to enforce discipline. Ironically, some of the offence across the four schools that called for corporal punished included: Not covering books, not completing homework, coming late, making noise in the class, fighting and failing in examinations. It is worth noting that physical abuse meted out on children in Nairobi III was extreme because girls narrated how they were forced to undress in front of their colleagues, up to their underwear, before they were caned. One girl recollected an incident when she refused to take her clothes off her clothes and the Director (owner of the school) sought help from boys to force her to do as instructed. Others girls explained how they were severely beaten using metal rods and wires as noted during the mixed

gender FGD (16 July 2014, Nairobi III):

Girl 5: I came from B Primary and there was everything [there]. Good teaching, choirs, games, sanitary pads were provided, teachers were paid, we are beaten on our hands but here we are beaten without clothes [...]

Girl 9: Yes we are beaten. Teacher Jane beat me in class 2 without dress at my behind.

Boy 8: Yes it happened I was beaten with shorts only. She forced me to remove my trousers. I had wronged maths. She used a stick to cane me at my behind

Boy 6: Yes she also beat me using a wire on my toes and legs. I wanted to drop out of school.

Girl 11: She used a pipe on me. I had wrong[ed] English. It was not very long ago.

These allegations were corroborated by participants in the Girls' FGD (16th July, 2014). The use of the cane in Nairobi I was not a preserve of to the teachers only as the school leaders or the prefects were also at liberty to cane other pupils who were found making noise, came to school late or committed any offence as guided by the school norms.

As the preceding discussions have shown, the use of the cane was deeply entrenched in this school, confirming that the use of corporal punishment on young people is a global challenge. (UNICEF, 2013). The UNICEF report indicates that three out of four children aged between 2 and 14 years have experienced some form of physical violence as a form of punishment either at home or school as a corrective measure. Research from different parts of the world reveals that caning, and other forms of corporal punishment have negative impact on children. According to the Donald et.al, (2003) caned children and those who watch the beatings become timid. In addition, corporal punishment make children to lose self-confidence, have magnified guilt feelings, and exhibit various anxiety symptoms. Due to intimidation and fear associated with corporal punishment, nurturing of open communication so critical in effective learning process is curtailed.

Bullying: Cases of bullying were reported across the four schools. Male pupils and especially the older ones were mentioned as the main perpetrators of teasing, hitting; shoving and tripping; taking lunch money, intimidation and physical violence. They reportedly bullied girls and small boys because they

were perceived to be physically strong. Most of the cases of bullying at the school level go unreported because the victims fear that they would be beaten or even harassed more if they reported. An example was given on how a well-known bully would react if he were to be reported to the authorities:

Moderator: Have you taken any action against him?

Boy 3: No.

Moderator: Why?

Boy 3: If you report him he will beat you even more.

Boy 6: He beat me 'juzi' (yesterday). Another bully here is B. [He points at this particular boy who was playing football and says] B, he can even beat you with a stone. So we fear reporting. (Boys FGD, 18th July 2014).

Sexual violence: Cases of sexual abuse and molestation featured prominently during the interviews. One female head explained that some parents encouraged their daughters engage in commercial sex to contribute to the family's income; "that coming from very poor background - where even to get food is a big problem; some mothers like another neighbour tells their daughter to go out and look for money." (Nairobi II head teacher interview, 2014). The head Teacher's opinion was supported by a parent who said: "you know if children lack basic things like food they will do anything to get food and so many girls get cheated by young men who entice them with money and in the process they get pregnant." (Nairobi II Female Parent 1, 18th July 2014). In addition, the same Head Teacher revealed that sexual harassment was rampant in the community forcing some girls to drop out school: *The girl confided in me she had a problem on where to stay because the brother who was a watchman was sharing a house with another man who was doing casual labour. So this meant that this man would be left alone with the girl at night and with time he had started coercing the girl to have sexual relationship with him. So the girl had to leave Kawangware and live with some relatives at Huruma (Head teacher interview, 14th July 2014).*

Further, it was revealed that girls were more likely to be molested by their own fathers or step fathers, male relatives or neighbours. One teacher, explained; "big girls who stay alone with their fathers are endangered. She may not tell what happens at night- big children share single rooms

with parents - influence of drugs, pornography or alcohol or make fathers to commit that erroneous act. (Female Teacher Interview 1, 15th July 2014). Some male guardians and relatives were reported to have impregnated school girls leading them to drop out of school. A teacher from Nairobi noted thus, 'You find that a girl is staying with a sister who is married and this man is still trying to sexually abuse this girl and so you wonder.' According to the head teacher rape cases were also common for both boys and girls. (Nairobi I Male Head Teacher Interview, 15th July 2014).

Focus group discussion with boys (Nairobi I) disclosed that some male teachers touched girls indecently; "some teachers touch girls badly and do not want us to see' even though teachers denied these allegations, but a follow up with a particular boy revealed that he had seen some teachers touching girls' breasts.

Verbal Abuse: Verbal abuse was also widespread in the schools visited with teachers and pupils being the main perpetrators. Pupils talked of how teachers over and over again used demeaning and derogatory terms on pupils. An example was given of how some teachers referred to pupils as 'gunia ya viazi' (bag of potatoes), 'thick', and 'you can't learn' (Nairobi II) while in Nairobi I some teachers regularly described pupils as 'stupid, empty brains and thick headed'. Specifically, some overage girls were referred to as 'mamas' a derogatory term meaning 'mothers'. Pupils also verbally abused one another and there were no gender patterns in the verbal abuses among boys and girls. Teachers noted that the common verbal abuses among pupils were connected to family members like 'your mother is a drunkard', 'your mother is a prostitute' 'you are useless and you will not make it'.

CONCLUSION

It is evident that, physical facilities such classrooms, desks, toilets, library, text books and stationery were grossly inadequate to enhance effective provision of quality education. Moreover, lack of adequate toilets, sanitary disposal bins and washrooms, in particular, had more serious consequences for girls because of their differentiated needs. Further, hostile learning environments characterised by bullying, teasing, and corporal punishment reduce the quality of education for all learners. Affected learners may evade going to school, participate less in class or drop out of school altogether. Such environments will particularly obstruct girls from acquiring relevant knowledge, attitudes and skills critical

for seeking further education which is essential for future career development and employment critical for not only personal development, but community development and sustainable futures. It is recommended that physical and psychosocial environments are improved for effective learning. In addition, teachers should be trained on gender responsive pedagogy and alternative methods of instilling discipline. Consequently, boys and girls will access quality education that is a key pathway to sustainable development.

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