Research on Humanities and Social Sciences
ISSN 2224-5766 (Paper) ISSN 2225-0484 (Online)
Vol.7, No.10, 2017

An Assessment of Sanitation Facilities in Selected Public Primary Schools in Kericho Municipality, Kenya

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Abstract
Sanitation is fundamental in promotion of hygiene and prevention of diseases it is a major cause of mortality and morbidity is children and general population. The government of Kenya has a National School Health Policy (2009) which entails sanitation guidelines for impure health and safety of the learners. The policy provides a commeasure school health programme which addresses all health needs to school going children. School administrators have a well-defined parameters and progress indicators to guide implementation this study aimed at assessing the sanitation facilities in selected public primary schools in Kericho Municipality. The study used a survey design to assess sanitation facilities in schedule public primary schools. Stratified sampling was used to sample 330 standard 7 pupils in 5 public schools. Data was collected using questionnaire and observation checklist. Questionnaires and interview schedules were used to collect date from the pupils. The data was analyzed using frequencies, percentages means and bar graphs.
Keywords: Sanitation, hygiene

1. Introduction

Sanitation facilities and personal hygiene practice are fundamental for good health whereby; a healthy and safe school implies a positive welcoming school climate for all pupils. According to World Health Organization (WHO) (1999) "Health is a state of complete, physical, mental and social wellbeing and not merely the absence of a disease". The health, academic performance and retention rates of school going children is adversely affected by availability accessibility and quality of stimuli facilitation. Studies indicates that 400 million children have diminished learning abilities due to intestinal worm infestation (Hall et al, 2008). On the other hand, according to international research centre on water and sanitation (IRC,2005) 75 percent of adolescent girls drop out of school due to lack of adequate private sanitation facilities in school.

Health and safety is one of the major problems affecting the world today especially in the developing countries where disease is evident due to poverty. Marzamb (2007) highlighted the relationship between pupils and teachers are necessary component to student learning attitudes which are significant in establishing and maintaining the relationships that enhance learning (Minds, 2006). Kenya has tried to come up with many commissions, committees, sessional papers to reform education sectors for instance; the Ominde commission of 1964 sought to eradicate disease, poverty and illiteracy, Education magazine (2005), and National action plan for education for all (E.F.A). However, so many schools need urgent repairs, innovation, moderation or new constructions in sanitation because the building of new facilities was compromised by the coming up of free primary education, in which , there has been a great influx of pupils realized in public schools thus straining sanitation facilities. The ministry of education has prescribed a policy of health and safety standard manual (2008) has not been implemented comprehensively.

The quality of the school shapes the attitude of teachers and learners whereby their attitude affects the learning behavior and performance. Blumende (2001) adds that decline in quality of education cannot be ignored by anyone as education is an instrument to societal transformation and development. It's through good interpersonal relationships in schools that good teaching and learning processes be achieved so that orphans, those with disabilities and those with special needs are catered for.

Indeed sanitation ,is a basic human right as ratified by most countries of the world in convection to the rights of a child (CRC) states that children have a right to a safe environment that enhance learning, health and development of good citizens (WHO 1999). Accordingly, the assessment of sanitation standards in public primary schools should be based on safely standards manual that has comprehensive guideline and minimum standard on various health and safely aspects for schools in Kenya.

Adequacy of Sanitary Facilities

A survey carried out in India on school going children revealed that about halfailments found are related to sanitary condition and personal hygiene, (UNICEF and IRC, 1997). According to Michael, (2002) essential environment for schools such as; quality of a school shapes the teachers learners from this attitude, resulting to school attendance. A study in the district of Colombia school system found after controlling other values variables such as student economic status, standardized achievements scores were lower in schools with poor building condition (Edwards, 1991) ; In which Cash (1993) ; Earth Man (1995) concurs. A study in Senegal revealed that many schools had drinking water, most of them tried to open one tap for 10-100 thus limiting

hygiene practices (Water and sanitation program, 2007). National latrine coverage was 90 % rose in 1960 but dropped to 30 % in 1980's rose 47 % in 1990's. In 1995 the primary schools enrollment was 2.5 million with 328.1 pupil latrine ratio.

Hand washing facilities in rural schools has not been considered important. Yet from a preventive health perspective hand washing is absolutely crucial. Without hand washing, all investment in fancy latrine construction is a complete waste of time and resources as faecal contamination from hand to mouth, food, friends etc is virtually guaranteed (Waterkayn, 2000). Male urinals are important as they reduce pressure on the use of latrine pits and are very convenient to use and easy to construct. They also have the advantage that they tend to help reduce the urine build up in the pits which is essentially helpful when considering the optimum requirements for good compost production where moist conditions are better than saturated ones. Female urinals are less common but still relative cheap to construct and are very well worth installing as they provide the same benefits as with the male.

In Africa today, more than two thirds (2/3) of the population lack sanitary means of excreta disposal (WHO, 2002). It further states that lack of access to safe drinking water and poor sanitation remains one of the causes of mortality especially among children and women who suffer most due to poor living conditions.

A study in Nyeri municipality revealed that schools with adequate sanitation facilities have higher examination mean score. Kanario (2013) explores on factors influencing participation in primary education in Naka IDP camp in UasinGishu County where she reports that inadequacy of physical facilities, trained teachers, teaching and learning materials lead to poor participation of learners. The Ministry of Education together with Church World Service and School Safe Zones entered into a partnership programme that promotes the safety of learners in schools. They came up with a manual on Safety Standards in Schools that covers physical aspects of schools ranging from the school grounds, buildings and sanitation. There are sections that also promote general hygiene and health. The manual emphasizes that ignoring of these aspects may inflict considerable damage to the physical, social and mental health of school-going children.

Set Standards

Latrines and A. Health Studies suggest that investments in child health can improve educational outcome since many school days are missed due to water-related illnesses. The latest evidence about this issue can be found in (Adukia 2014), who examines the effect of latrine construction on educational outcomes in India. She finds that access to school latrine has larger estimated impacts on primary school enrolment compared to upper-primary school enrolment, which suggest that latrines have important impacts through chi health. In a different study, (Greene et. al. 2014) authors find that the addition of latrine significantly increases the risk of Escherichia coli contagion among girls. These findings suggest that increased usage of latrines without uptake of hygiene behaviour change (such as hand-washing) may pose a risk to children. According to Edward Migue professor of developmental economics at UC Berkeley and others there is an unanswered question as to the efficacy of improving educational outcomes through latrine construction in the absence of hand washing facilities, and a reliable source clean, running water

Status quo (SQ): We define the status quo as the continued provision of Asante Africa's educational programming, in the absence of a sufficient supply of latrines 8, water and hand washing facilities, and sanitary pads. All other intervention packages assume the additional provision of educational programming.

Ventilated Improved Pit (VIP) Latrines: Ventilated improved pit latrines don't need water to function. They consist of holes in the ground, covered with concrete slabs that can be sealed when full or emptied for re-use after a period of stabilization. The following are characteristics of the VIP latrines assumed in our analysis:

- Sex-differentiation, with at least one latrine per 30 male students and one per 25 female students. Also, they should be in separated blocks.
- Structures are strong enough to ensure that it will not collapse.
- Doors with inside locks, and walls that provide an adequate level of privacy, specifically for girls.
- Girls' latrines have sufficient space for them to change their clothes. Also, they must have a mirror and shelves or hooks.

1. **Water and hand washing facilities:** Water supply is essential for hand washing and for menstruation-friendly hygiene practices. Female students and staff need water to wash themselves, their hands and cloths.

Lack of sanitation facilities can cause distress. Women and girls in particular face problems of distance, lack of privacy and personal safety. Poor sanitation is also a serious threat to the cleanliness of the environment and the water resources used for the supply of drinking water. But beyond being just an issue of convenience, children have a right to basic facilities such as school toilets, safe drinking water, clean surroundings and basic information on hygiene. In addition if sanitary conditions are created children will be more enthusiastic to come to school, they will enjoy their school experiences and will learn better; and can bring concepts and practices on sanitation and hygiene back to their families (Protos 2005).

Recommended ratio of adequate sanitary facilities provision

- First 30 girls
- For the next 270 girls
- Every additional girls4• 1 extra every 30 girls
- • Closet per 50 girls • First 30 boys
- For the next 270 boys
- Every additional boy
- 4 fitting
- 1 fitting for every 30 boys
- 1 fitting per 50 boys

RESEARCH METHODOLOGY

Research Design

A research design is the structure of the research. The study used survey design which therefore sought to assess the sanitation facilities in selected public primary schools in Kericho Municipality and if they comply with the Health and Safety Standards guidelines.

Target Population

The target population for this study was standard seven pupils in seventeen (17) public primary schools in Kericho Municipality. Class seven pupils were preferred not only because of their long stay they were able to understand the items in questions easily and respond to it. Class eight pupils were left out because they were preparing for KCPE.

Sample Size and Sampling Procedures

A sample is a set of respondents (people) selected from a larger population for the purpose of a convenience sampling. Simple random sampling was used to select 5 schools from 17 schools using simple random technique. The seventeen schools was written and folded, and then five was picked. Thereafter stratified random sampling was used to select 170 boys and 160 girls totaling to 330 respondents in sample schools which is 30 percent of the total population and the same in every school.

Data Collection Instruments

The researcher used questionnaires and observation checklists as the tools and instruments of data collection..

Data Analysis and Presentations

Each data piece was inspected to determine its usefulness incomplete data pieces were discarded. Data cleaning was done prior to analysis. The researcher proceeded to summarize the data by objective. Descriptive and inferential statistics was used to analyze the data collected. The descriptive statistics was used to calculate percentages, ratios, charts and frequencies. The findings of the study are discussed in chapter four.

RESULTS AND DISCUSSION

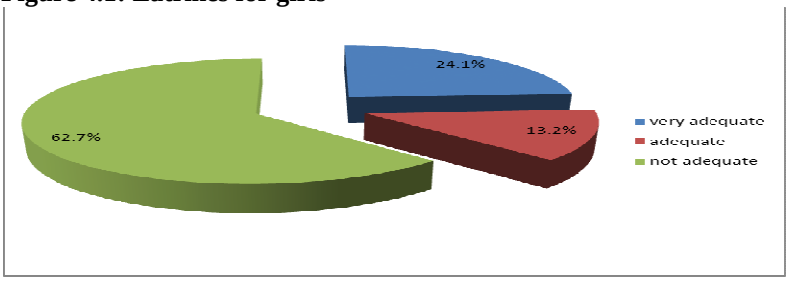
Sanitation facilities in public primary schools in Kericho municipality

Table 4.1: Latrines for boys

Response	Frequency	Percentage
very adequate	44	19.3
adequate	31	13.6
not adequate	153	67.1
Total	**228**	**100.0**

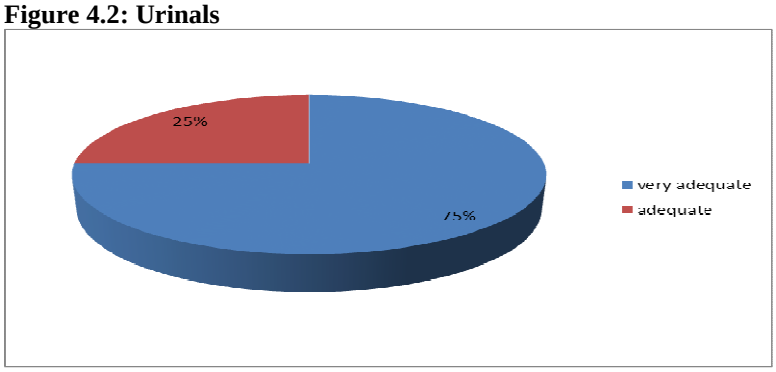
The study established that majority 153 (67.1%) did not have adequate latrines for boys while 44 (19.3%) and 31 (13.6%) were very adequate and adequate respectively. The study is in agreement with Barasa et al (2015) which noted that conditions in the schools of study varied from inappropriate and inadequate sanitary facilities to the outright lack of latrines and safe water for drinking and hygiene.

Figure 4.1: Latrines for girls



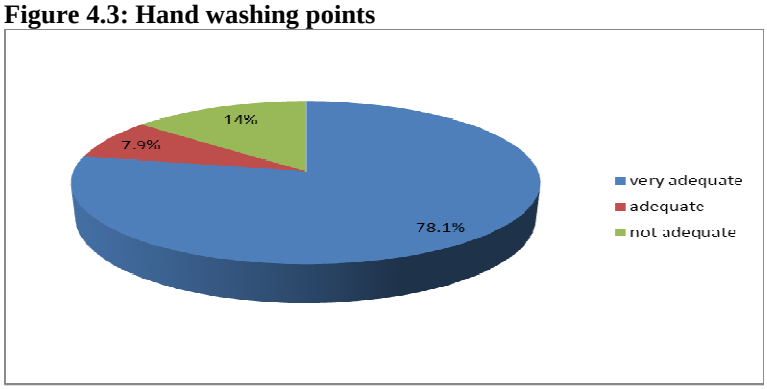
The findings noted that girls latrines were inadequate in majority 143 (62.7%) of the schools compared to 55 (24.1%) and 30 (13.2%) which had very adequate and adequate latrines for girls respectively. An assessment report showed that sanitary facilities were lacking in schools and wherever they existed, they were inadequate and in poor condition (UNESCO, 2005).

Figure 4.2: Urinals



Majority of the schools 171 (75%) said they have very adequate urinals while 57 (25%) said the urinals were adequate. This may be because urinals were found to be a relatively cheap way to mitigate the high cost of constructing new latrines (UNICEF, 2010). Urinals decrease the requirements of toilets. The national standards (Ministry of Education, 2008) require that one third of the fittings for boys should be closets and the rest urinals.

Figure 4.3: Hand washing points



The study established that majority 178 (78.1%) had very adequate hand washing points, 18 (7.9%) had adequate hand washing points while 32 (14%) indicated that hand washing points were not adequate. Some pupils may also forget to wash hands when the location of hand washing facilities is far away from latrines (Aseefa and Kumie, 2014). It was established that hand washing facilities were found near the latrine in27.3% of the schools.

Table 4.2: Drinking water points

	Frequency	Percentage
very adequate	74	32.5
adequate	148	64.9
not adequate	6	2.6
Total	**228**	**100.0**

From table 4.4 above, 74 (32.5%) of the schools indicated that the drinking water points were very adequate, 148 (64.9) noted that they were adequate water points while only 6 (2.6%) said they had inadequate drinking water points. The study concurs with the study done by Gisore (2013) in Kajiado Central district which

established that 55% had water available at the hand washing points.

Table 4.3: Rubbish points structures

	Frequency	Percentage
very adequate	160	70.2
adequate	68	29.8
Total	**228**	**100.0**

Majority 160 (70.2%) of the schools had very adequate rubbish points structures and 68 (19.8%) had adequate structures. Obembe et al (2014), in their study reported that many of the schools studied did have proper means of refuse disposal; they dispose off their refuse by burning or dumping in nearby bushes.

Compare sanitation facilities against the National Set Standards

The second objective was to make comparison between the sanitation facilities against the National Set Standards. The finding is summarized in table 4.6 below;

Table 4.4: Compare sanitation facilities against the national set standards

	Standards	Study findings
Boys	Urinal & closet for boys	1 urinal & 2 latrines 1:76
	1 closet : 25 learners	1 latrine 76 boys 1 latrine hole: 65 boys 1 latrine with door: 80 boys (schools without urinals)
Girls	1 closet: 25learners	1 latrine hole: 70girls 1 latrine with a door: 70girls
Staff	1 closet to 12 persons With separate facilities for males and females	1 latrine : 4 male 1 latrine: 7 female

The status of sanitation facilities in Kericho municipality was below the required national standards as entailed in the safety standards manual for schools in Kenya (2008). The ration of urinals and closet for boys was 1:76 while that of girls was 1:70 compared to the National Set Standard of 1:25. This shows that they are way far below the standards. It was however noted that the staff latrine ratio for both male and female met the set standards. The set standard is 1:12 while the study findings established that the ratio for male was 1:4 while the female ratio was 1:7.

CONCLUSION

Based on the findings of the study the study concluded that the sanitation facilities in public primary schools in Kericho municipality are inadequate, and those are in deplorable conditions. The study further concluded that the sanitation facilities available do not meet the National requirements. The toilet ratios were below the standards and there were inadequate hand washing facilities in some of the schools.

Recommendations

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

1 The MOE, public work health officers in the district and county should ensure that that the schools are built per the required sanitation facilities guideline constructed alongside classes
2 That the administration needs to have properly functioning and well maintained sanitation facilities they need to adhere to the natural set standards guide 2009) sanitation

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