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Full Length Research Paper

Integrating early childhood development (ECD) into mainstream primary school education in Zimbabwe: Implications to water, sanitation and hygiene delivery

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The study sought to investigate implementation of water, sanitation and hygiene (WASH) deliverables by rural primary schools in Bikita District. Four school heads and eight early childhood development (ECD) teachers from four schools were interviewed. An observation checklist was used to assess the adequacy and age-appropriateness of WASH facilities. The research analyzed the capacity of WASH policies to influence the vision, and implementation of WASH in ECD. It was found that WASH related recommendations in the Statutory Instrument (SI) 106/2005 were too elicit and irrelevant to rural primary schools in Bikita. The schools did not have age appropriate toilets and rest rooms for the 3 to 5-year children. The schools were dependent heavily on donor subsidies for WASH resources and this subsequently affected the sustainability of hygiene and sanitation activities once the resources were finished, or broken down in the case of water boreholes. The teachers identified large teacher to pupil ratios, teacher attitudes, and the absence of caregivers. This paper concluded that some careful assessment is critical for the production of a research based WASH in school policy that is not only desirable but also feasible in terms of its capacity to address the educational and developmental needs of the 3 to 5-year old children.

Key words: School sanitation, hygiene education, early childhood education, school, water, sanitation and hygiene (WASH), hand washing, sanitation.

INTRODUCTION

Early childhood education in Zimbabwe

Prior to independence, few children in Zimbabwe had access to organized childcare and development programmes (The Commission, 1999) . The Education Act 1987 amended in 1996 stipulates that every child shall have the right to education. The act is in line with the Millennium Development Goal (MDG) number 2, which aims to achieve universal primary education by 2015. In order to address the problem of low accessibility to ECD services, SIs 72 of 1999 and 106 of 2005 were passed (UNICEF report, 2005). The period between 1980 and 1999 saw an increase in the number of centers from 1,000 to 9,000 (6,000 in rural areas and 3,000 in urban areas), but only 3,500 of the centres were registered (The Commission, 1999). In 1998 and 1999 Early Childhood Education coverage was estimated at 405,000 children representing 34% of ECE going age (The Commission, 1999). Due to the laxity in policies governing registration, most of the centres operated with inappropriate and inadequate sanitary facilities (The Commission, 1999) thereby compromising the delivery of WASH (water sanitation and hygiene education) services.

Structure of primary education system in Zimbabwe

Since independence, the primary school education has

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been divided into 5 categories namely: (1) Former group A government schools, which had catered for Europeans before independence (2) Former group B government schools, which catered for urban African populations (3) Private high paying fee or Trust schools, for the elite (4) Low fee paying schools, mostly city council schools, and lastly (5) Rural community schools, which cater for the economically and socially disadvantaged rural African population. This study was undertaken to assess the implementation of water, sanitation and hygiene (WASH) in rural community schools.

Before 2005, primary school education was spread over seven grades. In 1999, the Nziramasanga Commission recommended the development of an expanded ECD programme to ensure that every child gets access to ECD education at least for one year prior to grade one. In 2004, the Government of Zimbabwe responded to the recommendations through the Secretary's policy number 14 of 2004. The policy required all the 5,411 primary schools in the country to integrate ECD into the mainstream primary school education system. The other thing that the commission found was that, issues of proper water, sanitation and hygiene promotion were not addressed holistically by primary schools in the country (The Commission, 1999). Meanwhile, children under the age of five are more vulnerable to WASH diseases, such as diarrhea, worm infestations and bilharzias.

The water, sanitation, and hygiene promotion in Zimbabwe

Despite having accepted sanitation as a human rights issue, Zimbabwe, like the rest of Sub-Saharan Africa is facing challenges in sanitation; hence it is unlikely for Zimbabwe to meet its global commitment of improved access and coverage to safe sanitation by 2015. Over the past 10 years, the country experienced cyclone Eline and cyclone Japhet that destroyed infrastructure such as classroom blocks, latrines and water points at rural schools. Currently the country needs to build at least 65,000 latrines per year in rural areas in order to meet its sanitation goals. The rehabilitation of broken down infrastructure was negatively affected by politically motivated conflicts, shortages of foreign currency, inflation and droughts.

Due to the collapse of sanitation service delivery, Zimbabwe suffered a cholera outbreak during the period of August 2008 to May 2009, which recorded more than 98,000 cases and claiming more than 4,000 lives (WHO, 2010). In-spite of the existing evidence that the sanitation and hygiene conditions in Zimbabwe schools are below standard the Ministry of Education pressed for integration of ECD into the mainstream primary school education system.

Statement of the problem

In Zimbabwe, the question of health policies in learning institutions has always been addressed half-heartedly (The Commission, 1999). The reluctance to tackle health issues head-on could be attributed to lack of data on which to base informed decisions or uncertainties surrounding the importance of ensuring good health and sanitation to the total development of the child. Lack of safe water, sanitation and hygiene education (WASH) contributes to diarrhea and pneumonia, which are the leading killers of children under the age of five; hence, MDG number 7 seeks to halve the proportion of people without access to WASH; this is of vital relevance to children in ECD. WASH in ECD is also a key prerequisite for child mortality (MDG 4 to 5) and combating disease (MDG 6) reducing under nutrition (MDG 1) and achieving universal primary education (MDG 2). In Zimbabwe, more than 40% of diarrhea cases in school children results from contamination at school than home (UNDP, 2011).To this end, the study sought to address the following research questions:

1. Do primary schools have adequate and appropriate WASH facilities for 2 to 5 year old children in ECD?
2. What are the perceptions of ECD teachers and school heads on WASH delivery to children in ECD?
3. Are the WASH policies in the country capable of informing WASH programming in rural primary schools?

Justification of the study

The research is justified in that it would give ECD practitioners an opportunity to analyze and reflect on the importance of quality WASH provisions to the total development of the child. In addition, the method of data collection that involved holding conversations with the ECD teachers and the school heads is in itself empowering (Wiersma, 2000). The study might also provide the policy makers with useful information needed in re-examining the capacity of legislations on WASH in schools.

LITERATURE REVIEW

Why WASH in schools

The international convention on Human Rights Article 24, maintains that, member states should recognize the right of the child to the enjoyment of the highest attainable standard of health by way of combating disease and malnutrition through the provision of adequate nutritious

foods, clean drinking water and sanitation services (Kent, 2004). WASH in schools help to fulfill children's rights to education and participation and enjoys widespread recognition for its significant role in achieving the millennium development goals particularly those related to universal access to primary education, reducing child mortality, improving water and sanitation and increasing gender equity.

Benefits of WASH education in schools

WASH in schools, provide safe drinking water, improves sanitation facilities and promotes lifelong health. It improves the well-being of children and their families and paves way for new generations of health children (UNICEF, 2010).WASH in schools provides a health, safe and secure school environment, which can protect children from health hazards, abuse and exclusion. It ensures quality education, because children who are health and well nourished can fully participate in schooling and gain its maximum benefits (UNICEF, 2006). Quality education in turn leads to better health and nutrition outcomes especially for girls.

WASH in schools enables children to pride with their schools and community by providing dignity and privacy. It enables schools to be agents of change for improving water, sanitation and hygiene practices in the family and community. Because safe water, improved sanitation and good hygiene, are closely related to better health, reducing the WASH related diseases also cuts corresponding health costs.

Improved water, sanitation and hygiene promotion in schools also benefits the girl child more than the boy. Girls who have reached puberty need gender related privacy, and if that privacy is not guaranteed the girls may avoid school toilets resulting in increased absenteeism. In Alwar District, India the school sanitation programme increased girls enrollment by one third leading to a 25% improvement in academic performance (UNICEF India, 2008). Finally, improved water, sanitation and hygiene education helps fulfill each child's right to health and education.

Education, attendance and achievement

Education and health work in synergy, nutrition deficiency, diarrhea, and worm infestations are related to inadequate sanitation and hygiene and they all affect school participation, learning and attendance (UNICEF, 2006). Some studies in Bangladesh, found a 15% increase in attendance when water was available within a 15 min walk compared to 1 hour or more (UNICEF and IRC, 2006). A similar study in Tanzania showed a 12% increase in school attendance when water is available within a 15 min walk (Redhouse, 2004). A programme in Chinese primary schools to promote had washing by the provision of soap and a selection of a 'student hand washing champion' result in health children who had 54% fewer days of absence (Bowen, 2007). Children in Bogota who reported proper hand washing behavior in school facilities had a 20% less likely to report absence than those in schools without good hygiene practices (Lopez et al., 2009). In another study a randomized impact evaluation of a de-worming programme in Western Kenya demonstrated that the worm burden in children contributes to 25% of overall school absenteeism.

An estimated 47% of children between 5 to 9 years old of age from developing countries are infested with the three main types of soil-transmitted worms; hookworms, round worms, and whipworm (Hall et al., 2008). The most nutritional problem caused by worm infections is iron deficiency anaemia.

The average IQ loss per-worm infestation is 3.75 points, representing 633 million IQ points lost for the people who leave in the world's poorest countries (Pruss, 2005). Hence, worm infestations threaten children cognitive development and allow a recurrent cycle of missed school attendance, poorer school performance and thus, subsequently resulting in poverty.

Therefore, safe water, sanitation and hygiene are major factors in protecting children from infestations and other illnesses. By providing access to WASH facilities and encouraging behavior change with the participation of children, the burden of diseases can be lifted and children opportunities expanded.

WASH linked diseases

Early childhood is a time of great opportunity and a time of great vulnerability (Tarrullo, 2002) as it is marked by some rapid and dramatic changes in physical and mental development. Tarullo (2007) also concedes that children's physical, emotional and cognitive development is a by-product of their health and nutritional status. Poor sanitation exposes children to diseases and a diseased child is more sustainable to malnutrition. Tarullo (2007) maintains that a comprehensive ECD program ensures that the center is made ready for children by putting in place inclusive water and sanitation infrastructure before enrolling children.

WASH in schools, is the first step towards ensuring a health-learning environment and is important in lessening the spread of disease. Worms affect an estimated 400 million school aged children in the developing world. Nine chronic worm infestations are associated with impaired physical growth and impaired intellectual development

and children enduring intense infestation with whipworm miss twice as many school days as their infestation free peers (WHO, 2007). Each year children loose 272 million school days due to diarrhea (Hutton and Haller, 2004). Improving WASH conditions in schools helps prevent infestation with soil transmitted worms, of which 100% of annual cases are attributed to inadequate sanitation and hygiene (Pruss, 2005). De-worming services, supported by hygiene education, help children avoid re- infections, and water and sanitation prevent children from re-exposure.

In Zimbabwe, high rates of diarrhea (13%), acute respiratory infection (16%), and fever (14%) contribute to the high rate of malnutrition (National Nutrition Survey, 2010). Diarrhea is the second leading cause of death among children under the age of five (after pneumonia) and causes chronic malnutrition in millions of children (UNICEF, 2006). Researchers estimate that effective sanitation services alone can reduce diarrheal disease by up to 45%. In Zimbabwe, more than 40% of diarrhea cases in school children results from contamination at school than home (UNDP, 2011).

While there are limited data regarding the relationship between HIV/AIDS and nutrition in Zimbabwe, estimates suggest that up to 70% of admissions to therapeutic feeding centers are HIV positive and global experience has established a strong correlation between nutrition and HIV (Nutrition Survey, 2010) . The Rates of HIV in Zimbabwe are among the highest in the world, with 13.7 % of adults being HIV positive (SAFAIDS, 2010). Currently, over 340,000 people Living with HIV (PLHIV) are in urgent need of Anti Retroviral (CD4 count 200 and below); 593,168 in need of ART (CD4 count of 350 and below) with only 259,000 people accessing ART including 10,000 through the private sector (SAFAIDS, 2010). Because of the limited accessibility to both preventive and curative health services most rural children are likely to be among the people that are not accessing ART; hence, they are more susceptible to WASH related diseases.

Children as change agents in WASH

Water, sanitation and hygiene education across schools is one of the best ways to reach entire communities. Direct engagements with children can lead to community adoption of good WASH behaviours and technologies (Poverty Action Lab, 2007) as well as improved health (WHO, 2005) . The major advantage of introducing WASH programmes to infants is that children are fast learners and they can easily change their behaviour or develop long-term behaviours because of increased knowledge and facilitated practice. Once children are introduced to new WASH technologies in school, they may question existing practices in their homes and by demonstrating good hygiene; they become agents of change within their own families and communities.

1. Children are role models because what they learn at school is likely to be passed to peers and to other children if they become parents.
2. Teachers are influential if supported by parents. They can be very useful in developing children capacities to become community role models.

The case studies were given to highlight the importance of children in promoting WASH.

Case 1: In a project called ‘Dokter Kecil’ or little doctors, primary school children promote good hygiene through community theatre and other interactive events to convey the importance of washing hands with soap before preparing food and eating as well as washing hands with soap after using the toilet. The children produce plays for their parents and other community members. The children also take charge of Jum´at Bersih (clean Friday), a national movement that began in 1994 and encourage hygiene promotion particularly hand washing with soap, during meetings on Islam´s holiday day (UNICEF, 2010).

Case 2: Experience from Sierra Leone’s school Health Club have shown that working with school children is one of the best ways of promoting good hygiene and sanitation (Quarterly Report WASH-Sierra Leone; UNICEF Report, April-June, 2009) . As explained by Fatmata, age 12 ‘we learn about good hygiene through games and sports but we also have a serious responsibility as we pass these messages on to our families and friends’. In addition Fatmata noted that through the dedication of the school health club, the majority of the families in her community now have access to latrines (Quarterly Report WASH-Sierra Leone; UNICEF Report, April- June, 2009) . Currently, forty to fifty percent of the rural population has access to safe sanitation (UNDP, 2011).

Hygiene

Households that have a hand washing soap show a 53% lower incidence of diarrhea among children under the age of 15 years (Luby, 2005). Also, studies have shown a 30% reduction in diarrhea for children in ECD and primary schools using soap for hand washing. Washing hands with soap could reduce acute respiratory infections, including pneumonia which kills more children than AIDS, malaria and measles combined by 25%

(Global Hand Washing Day Planners' Guide, 2009).

The evaluation of school sanitation and hygiene education pilot programmes in six countries Burkina Faso, Zambia, Colombia, Nicaragua, Nepal and Viet Nam revealed that the availability of soap was a major problem in most of the schools. Reasons included high cost and fear that it will be stolen (UNICEF and IRC, 2006). Another study in Kenya showed that only 2% of the children from 5% of the facilities that provided soap used soap regularly.

METHODOLOGY

The study employed a descriptive survey design. Systematic random sampling was used to select four rural primary schools from 10 schools in Wards 13, 9 and 10 of Bikita district. Purposive sampling was then used to select 10 ECD teachers from the participating schools with the intention of gathering data on the classroom dynamics affecting the delivery of WASH to the 2 to 5 year old children in ECD. Direct observations were used to assess the adequacy and appropriateness of WASH infrastructure in the schools. Post observation reflective interviews were held after the observations in order to gain some insight on the perceptions of the teachers and school heads on the delivery of WASH services. Three school heads and a deputy head were also interviewed in order to elicit information on the administrative issues affecting WASH in the participating schools. Open-ended questions were preferred as they allowed conclusions to be arrived at the participants' way of thinking on issues affecting WASH in schools (Cresswel, 2005). In addition, the qualitative data collection techniques empowered the teachers and the school heads because they somehow got the opportunity to analyze the impact of WASH in the schools to the total development of the schools. A research diary was used to capture running field notes and writing reflective comments. The triangulation of observation, reflective interviews and a research diary as well as the review of data sources was important to the reliability and validity of the research findings (Wiersma, 2000).

Ethical considerations were met through employing principles of anonymity and participants' informed consent. In this study, keeping the identity of individuals confidential offered privacy to participants. Obtaining permission and clearly communicating the purpose of the study before data collection lessened reservations some individuals might have had (Creswell, 2005: 171).

FINDINGS AND DISCUSSION

Demographic data

Enrollment data show that the communities overwhelmingly accepted the intergration of ECD into the mainstream primary school system. The four schools had 34, 37, 48 and 57 ECD children. In terms of staffing, the schools had six teachers, with the following qualifications: one paraprofessional, two infant trained teachers, one ECD diploma trained teacher and two student teachers. Except for one school, that allocated 2 classrooms for ECD children, the other three schools had one classroom for all the ECD children. All the schools did not differentiate the pupils into ECD, A and B in compliance with the Secretary's policy number 14 of 2004. Children between 2 to 3 years are more vulnerable to infestations on their own and hence they require closer WASH supervision, compared to the five year old (Papalia et al., 2004).

WASH evidence in schools

In order to gather some data on the quality of WASH in the schools, the researchers assessed the appropriateness of WASH related facilities such as the source of water, age appropriateness of the toilets, availability of water for cleaning hands and toilets and drinking, as well as some evidence of hygiene education.

Toilet space allocation

The most popular toilet was the BVIP (Blair ventilated improved pit latrine). Regarding the allocation of toilet space three of the schools had allocated separate toilets for the under fives, while in one of the schools the ECD children shared the same toilets with the other school children from the upper grades, and as a result the ECD teacher could not supervise toilet use and cleaning. The SI maintains that children in ECD must be allocated separate toilets. The child to toilet-hole ratio ranged between 17:1 and 34:1. Meanwhile, SI 106/2005 stipulates a minimum of eight children to one squat-hole child to toilet ratio. All the four schools maintained separate toilets for boys and girls.

Water

All the schools had a deep well, or a borehole with in a distance of 500 m. However, one of the boreholes was broken down at the time of the study and the other one was seasonal such that the school had water problems during the spring and part of the summer seasons. All the four school boreholes were donor funded.

Hand washing and toilet cleaning materials

The study established that none of the ECD classes had washing basins. All the schools had received washing soap, toilet cleaning equipment and water containers from UNICEF. The study noted that all the schools used the soap for washing sporting uniforms at the expense of

hand washing. The findings show that both the teachers and the school administration did not prioritize hand washing hence they decided to use the soap for washing school uniforms.

In order to turn hand washing into a peoples' campaign in Rajasthan, India, the education Minister responded to a UNICEF donation of WASH materials by requesting the School developing committees education officers, the sarpanches (village heads) and the community itself ensures the availability of soap in every school and at all the times (UNICEF, 2009).

Classroom space

Data on classroom space showed that the smallest class had 35 children and the largest had 48 children. In a study to investigate the nutritional status of pre-school children in the Andhra Pradesh region of India, Geervani and Devi (2003) found that the frequency of WASH related infections such as scabies, measles and diarrhea were high in overcrowded ECD centers. In order to reduce overcrowding all the participating schools were supposed to build more classroom blocks.

Hygiene education materials

In order to assess the quality of hygiene education the team of researchers sought evidence on the involvement of ECD children in health campaigns; the number of hygiene education fliers or hygiene education massages within the school premises (both locally produced or imported from outside). The researchers also sought evidence on the availability and use of hand washing soap and the use of sanitizers to clean toilets, classroom floors and children's toys.

The following data were obtained: None of the ECD classes were involved in some hygiene education campaign within the past 12 months; however, all the schools indicated the existence of a health club. Although some civic organizations commemorate hygiene awareness galas such as the Global hand washing days, both the ECD teachers and school heads were not aware of this global event. School health clubs can play a pivotal role in educating communities and fellow school children about the importance WASH in total human development. For example, some 11 schools from Neno District in Malawi used safe water clubs to communicate safe water and hygiene messages to 5, 500 children and community members. The efforts accounted for a 90% reduction in absenteeism due to diarrheal disease in participating schools. WHO and UNICEF posters were available in all the ECD classes. The study concluded that the implementation of WASH education in the schools was viewed as a service and not as children's rights hence, converting soap that was meant for hand washing to other uses.

School heads and teacher perceptions

The major themes that emerged from interviews showed that teachers were more concerned and more worried about the non- availability of age appropriate and adequate WASH related hardware (water and sanitary related facilities) in the schools as well as the job related factors such as the large pupil to teacher ratios.

All the three school heads concurred that the government had neglected its obligation of promoting schools readiness to the integration of ECD children into the mainstream primary school system. One of the school heads noted that ECD is the only group of learners that was not receiving direct funding from government. The other primary school children received Basic Education Assistance Module (BEAM), while students in higher education were getting student cadetship grants. The study noted that the expanded ECD programme was launched at a time when communities and the country was going through economic challenges, and hence the schools could not put in place age appropriate WASH related infrastructure such as toilets with small holes and rest rooms.

In concurrence, the other school head said: "*Tiri kutarisira zvakawandisa kubva kuvabereki, kuda nekuUNICEF, zvino vabereki vazhinji Havana maresources acho. Kudai government, ikaitawo zvayakapromisa pokutanga, zvokuti ichatipa mabuildings uye furniture"* (We are asking too much from impoverished parents for WASH in schools, I think the Government should meet its promises for example, section 9.0, of the Director's Policy number 48 of 2007 states that, the government shall provide furniture and building grants to schools in need).

In light of these findings, it appears the government of Zimbabwe through the Ministry of education should take a right approach to WASH in school in order improve children's protection from infections by way of ensuring that primary schools are more inclusive to the WASH needs of children in ECD.

All the ECD teachers noted that children were exposed to soil related infections because of the unavailability of adequate and age appropriate furniture and proper resting space. One of the teachers said: "*Nyaya yokuti vana vanogara pafloor uye vanorara pafloor inorwadza, plus ndizvo zvinoita kuti vana vanyanye mhezi uye mabayo"* (The problem is that children sit on the floor and they also sleep on the floor because the school does not

have furniture and a rest room. As a result, children are exposed to diseases such as scabies, colds and pneumonia. An estimated 47% of children between 5 to 9 years old of age from developing countries are infested with the three main types of soil-transmitted worms; hookworms, round worms, and whipworm (WHO, 2007). The most common nutritional problem caused by worm infections is iron deficiency anaemia. Iron deficiency is also linked to impaired cognitive functioning (Guthrie, 1989).

Again, related to the issue of poor WASH in schools, all the teachers reported a very high absenteeism rate on rainy days, because the floors will be wet and cold, hence uncomfortable. Another teacher indicated that on one of the rainy days only five children from a class of 48 children, reported for lessons.

The teachers indicated that HIV and AIDS infected children were more vulnerable to the poor WASH conditions. One of the ECD teachers said ‘‘*tine vana vanoratidza kurwara neHIV and AIDS, apa vamwe vacho vanenge vasina majuzi kana boots, vanodhererwa nechando chepafloor, musi uno ndakatodzorera vamwe vana vaviri kumba vava kutadza kufema*” (there are a number of HIV positive children, in this school, some of whom come to school bare footed and without jerseys, these children are more vulnerable to the poor WASH conditions in our classrooms and at the toilets. Last week I asked two children to go back home because they were showing breathing difficulties). According to the Southern Africa HIV and AIDS information dissemination service (2010), 44% of the people in need of ART treatment are not accessing it. Children are voiceless and could constitute a greater percentage of the people without access to ART treatment, especially after the death of their biological parents (SAFAIDS, 2011).

The study concluded that ECD children who came to school barefooted were more susceptible to WASH related diseases transmitted in fecal and urine matter such as *Escherichia coli*-infections, dysentery, cholera, diarrhea and bilhazia. This finding concurs with Bronfenbrenner’s ‘deficit model’, which states that an incapacitated family is the major source of risk for child development. In this light Bronfenbrenner (2005) maintains that an ECD program for an economically disadvantaged community is supposed to adopt a two-generation model approach were interventions should also seek to capacitate the parents. Tarullo (2007) also concurs that poverty has complex effects on ECD programmes.

Staffing

In terms of staffing all the ECD teachers concurred that they were understaffed and this affected the quality of hand washing, toilet training and toilet cleaning supervision. In addition, most of the schools could not create ECD ‘A’ and ‘B’ due to classroom space shortages as stipulated in the secretary’s policy number 14 of 2004. For example, one of the classes had 18 children below three years and 30 above three-year-old children. In addition, the schools did not hire the services of a caregiver as stipulated in the SI 106/2005. According to Tarullo (2007) children below age three require closer WASH related supervision than the older ECD children; hence, the teacher pupil ratio has to be revised down if a class is not differentiated into ECD ‘A’ and ‘B’. In addition the ECD teachers and the school heads agreed to the effects of poor remuneration on teacher morale and on the subsequent delivery of WASH in school.

One of the teachers said ‘we do not have adequate water for hand washing with soap, first we do not have large water containers and secondly the school does not employ auxiliary staff or care givers who could otherwise ensure that the class has enough supply of drinking and hand washing water’. The teacher noted the idea of using the older girls to fetch water was unfair because it robbed children’s learning time’. The teacher indicated that ECD classes should be empowered to hire caregivers who will take care of WASH related services to include toilet cleaning and the fetching of water. In order to address problems of water adequacy, some schools in Nepal used some large water containers that dispense enough water for a single hand wash liquid soap added to the water (UNICEF and IRC, 2006).

The ECD teachers indicated that most of the toilet holes were not age appropriate. One of the teachers said *“Chinonyanya kunetsa ndechekuti vana vamwe vaduku zvakanyanya saka vanotoda kuperekedzwa kutoilet, uye matoilets acho hahana kugadzirirwa pwere dzakadai, makomba acho akatikurisei saka , tinotya kuti vana vevanhu vanogona kuwira” (* some of the children are too young and therefore, they require indvidualised toilet supervision, and in addition the toilet holes are too large for the 3 year old children). In light of the above the study concluded that the schools were not ready to integrate ECD children, in terms of having the necessary WASH infrastructure.

Capacity of WASH policies in the country to direct wash in schools

The study found that Zimbabwe does not have a National WASH policy framework. A draft policy produced in 2004, and reviewed in 2009 indicated gaps among them, the new knowledge and environmental changes related to climate change issues were not addressed in the 2004

draft policy. For the delivery of WASH in the country, a variety of related legislations such as the public Health Act, the Water Act and the District Development Act are used. However, to guide WASH in ECD, the SI 106/2005 was produced by the Ministry of Education Sport and Culture. Some regulatory policies such as the Director's policies number 48 of 2007 were passed to address the WASH needs of ECD children. Some of the WASH related sections in the SI instrument and its regulatory instrument in the Director's circular 48 of 2007 are given below:

Section 11 of the SI 106/205 states:
(a) A total indoor playing space 2.25 square meters for each child.
(b) Flash water closets shall be provided in the ratio of 1:8 children
(f) Hot water and running water shall be available in the center building
(g) Wash basins will be provided in the ratio of 1:6

Section 12 of the instrument simply states that *"ECD centers shall be maintained safe, clean and sanitary condition. (k) Adequate indoor storage space and cloak facilities shall be provided.*

The Directors' circular number 12 of 2005 paragraph reads: "*Grants may be given to centers without buildings, furniture, and plates. Paragraph 9.0: All school heads of the primary school should: ensure that centre supervisors maintain up to date records on …progress and health cards".*

Judging on the statements given above the SI and its regulatory Instrument (RI) were developed in isolation from the budgetary challenges facing the poor rural communities and the government. The sections on WASH in ECD seem to be articulating situations that are desirable without considering feasibility challenges. The language used describes facilities found in urban ECD centers only.

Conclusion

It emerged that the sections of the SI that address WASH in ECD are rather too idealistic and seemed to assume that all ECD centres are situated in the urban areas. The study also noted that the rural primary schools did not have adequate and appropriate WASH physical facilities such as toilets and rest rooms. Most of the WASH provisions in the schools were supplied by NGOs. Problems were identified in the adoption and sustainability of hygiene education skills such as hand washing with soap. ECD children from needy backgrounds that could not afford shoes, children below age three, as well as the HIV and AIDS infected children were identified as more vulnerable to WASH related diseases in the school. In addition, the poor working conditions affected the supervision of WASH activities. In light of these conclusions, the study recommends that the government should empower rural communities economically so that they can cope with the needs of their children. In order to promote equality of WASH deliverables in ECD the Ministry of Education Sports and Culture should produce a more realistic legislation to guide WASH activities in primary schools.

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