

The status of school sanitation facilities in some selected primary and secondary schools in Dessie City Administration, South Wello Zone, Amhara Region

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Abstract

Background: There is a growing demand on school hygiene and sanitation facilities given the growing number of school enrolment in Ethiopia. A safe school environment plays a key role in facilitating education and enduring pupils with improved life skills. Although there is much attention given for the expansion of schools to reach all school aged children in Ethiopia, the concern on focusing school hygiene and sanitation remains to be a challenge.

Objectives of the study: A assessing the status of water and sanitary facilities in selected schools of Dessie Town with the intention of obtaining exploring baseline to serve for implementation of an Urban Health Extension Program in the region.

Methods: This study was done in May 2010 in Dessie City Administration. Questionnaire-based interviews with school principals and record reviews supplemented by physical observation were used to collect the necessary data. Descriptive statistics was used to present the findings.

Results: The overall latrine to school population ratio was (1:64), which was about twice less than the recommended one. The ratio for female students was significantly lower than that for males. The access to drinking water facilities (water taps) and hand washing facilities were very much limited to the extent not conforming to the standard. The presence of school-based water, sanitation, and hygiene committee and clubs was unheard.

Conclusion: The inadequate sanitation facility in schools poses a health risk that would impact students' potential to attend education. Hence, a coordinated effort among all concerned school to safeguard the school environment should be considered as one part of the path for reaching the MDG goals with respect to at least sanitation. [*Ethiop. J. Health Dev.* 2013;27(1):80-84]

Introduction

Ethiopia at present is aggressively expanding primary education to reach all eligible children in order to meet the MDGs in the education sector. The total national enrollment for primary schools (grades 1-8) has grown to 57% (2007/8) from its baseline of 34.7% (2003/4) (11). This has now reached 94.2% as of 2010, according the National Growth and Transformation Plan document (2). The gender disparity in enrollment between males and females has significantly gone down clearly the same years. The National Growth and Transformation Plan for the 2010/11-2014/15 have clearly set the path to follow to completely satisfy and fulfill the rights of children for education (3).

While education is no doubt important for children in one hand, the status of their health and immediate environment on the other hand are factors that adversely affect their health and wellbeing. The integration of education with life skill learning is, therefore, a basic requirement for aspiration fulfilling then a good life in the future.

Ethiopia has committed itself to fulfill the achievements of MDGs including Goal 7 which emphasizes reducing the proportion of the population without sustainable

access to basic sanitation by half (4), in which it is believed that schools are part of this goal.

A nationwide survey undertaken on school Water and Hand Washing Sanitation (WASH) facilities in Ethiopia indicated a very low coverage, 32.5% in drinking water facilities (5). The same survey reported that the disparity in access by male and female pupils (latrine to students' ratio) is very wide: 1:170 for the overall, and 1:164 for males and 1:177 for females. This is much lower than the optimum student to latrine seat ratio of 1:30 (6). Sporadic assessment in Bensangul Gumuz Region of Ethiopia indicated a similar situation pointing out that girls are the most disadvantaged in using latrines (7). The same source indicated little attention is given to school sanitation by school authorities.

The status of school sanitation is similar in other developing countries. Limited school toilets were not serving their purpose and the ownership of the toilets was unclear in South Africa (8). The ratio of latrines to the number of students was shown to be insufficient in Zambia and Malawi (9, 10). Existing school latrines were unclear and not adequate to serve the school children (11).

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This explorative assessment of WASH in schools attempted to find out the existing status of school sanitation facilities before the implementation of the Urban Health Extension Program using School Led Total sanitation. It is hoped to greatly improve the school setting in having optimum WASH coverage during the end of 2015 thereby accomplishing better performance in school sanitation.

Methods

This cross-sectional study was done in May 2010 in ten randomly (using a lottery method) selected schools (2 secondary integrated with primary and 8 primary schools) out of 35 schools in Dessie City Administration. A structured check list focusing on sanitary facilities such as latrines, drinking water and hand washing facilities was used to collect data by two environmental health workers. In addition, discussion with the school principals on school sanitation problems and record reviews were used to assess the sanitation status of the schools. Observation of the school environment and record review were the primary source of research data. Descriptive statistics was used to present results.

Results

A total of 14704 school pupils and others were found at the time of the study in the ten studied schools. Of the

14073 students, 49.5% were males, with almost 1:1 male female ratio.

Traditional pit latrines were the dominant type of human waste management. The overall single latrine seat to school users varied between 1:27 to 1:86 with an average of 1 latrine to 64 (Table 1). The disparity in the ratio was significant by sex ($p < 0.05$), females being the most disadvantaged. Only 3 out of 10 schools have designated separate latrines for teachers and students. However, only two of these schools had standalone blocks of latrine located in different sites for use serving males and females.

Not a single hand washing facilities was observed near or around the latrines in all the schools. The interviews with School principals indicated that the allocation of budget for WASH has never been practiced for at least during the last five years. All schools had drinking water lines that were connected to the Dessie city water supply system. The ratio of a water tap to school population varied across schools, this was on the average 1:114.

The presence of NGOs or any other community organization working on School WASH was not observed, except a sporadic support from UNICEF to a few Schools. Establishing Committees to work on School WASH had not been an agenda in the past.

Table 1: **Distribution of latrine seats to school population in 10 Schools, Dessie, May 2010**

Name of schools	No of teachers and supportive staff			No of students			Total school population			No of latrines			Latrine to population ratio	No of water taps
	M*	F*	Total	M	F	Total	M	F	Total	M	F	Total		
Hote Secondary School (has a primary school)	116	27	143	1891	1609	3500	2007	1636	3643	24	19	43	1:84	25
Kidame Gebeyia Secondary School (has a primary school)	65	21	86	1019	1044	2063	1084	1065	2149	18	13	31	1:69	23
Segno Gebeyia Primary School	32	27	59	726	864	1590	758	891	1649	16	13	29	1:57	12
Etege Menen Primary School	57	24	81	764	958	1722	821	982	1803	12	9	21	1:86	11
Robit Primary School	25	28	53	533	695	1228	558	723	1281	13	9	22	1:58	8
Karagutu Primary School	20	15	35	356	395	751	376	410	786	8	5	13	1:61	6
Tosa Primary School	18	24	42	682	628	1310	700	652	1352	15	10	25	1:54	9
MerhaTibeb Primary School	21	29	50	391	432	823	412	461	873	7	4	11	1:79	7
Alpha Primary School	28	11	39	299	297	596	327	308	635	9	7	15	1:42	7
Merkezel Birhan Primary School	18	25	43	305	185	490	32	192	533	11	8	19	1:28	21
Total	400	231	631	6966	7107	14073	7366	7337	14703	132	97	229	1:64	129

M* stands for Male; F* stands for Female

Discussion

The overall latrine to school population ratio was (1:64). Showing that the current latrine coverage in the schools was about two times lower than what is recommended (6). However, this ratio seemed to be better than the one in Dire Dawa area, 1:175 (12). The low ratio is generally consistent with that of the national study done in 2007 (5), although there seemed to be better progress in the present study. There are indications that the planned latrine provision in schools will be comprehensive in the coming few years which could hopefully be achieved. Strategies to scale up WASH in schools include the urban health extension program, Universal Access Plan, Community Led Total Sanitation in School settings, National Hygiene and Sanitation Strategy and National WASH movement (13).

The limited number of water taps for drinking and hand washing in the studied schools is a prevailing burden that compromises hygiene such as hand washing after latrine use. This is very much an unfortunate situation in all Ethiopian schools that share similar WASH conditions (5).

There is a concern that the prevailing low WASH coverage in the schools may continue given the uncertainty to sustain access and complete the easy availability of sanitation facilities. Even though it is certain that schools with proper sanitation and hygiene reinforced by WASH facilities, would play important roles in fostering a good teaching and learning process. The end of MDG is very close, just 2 years left. Community Led Total Hygiene and Sanitation (CLTHS) neither is, nor now considered as a main tool to deal with improvement of sanitation status in all focal areas of a community including school settings. The Federal Ministry of Health has set a guideline to accelerate WASH coverage in the country through CLTHS (14). Accelerating school sanitation is a challenge even with the intervention using School Led Total sanitation. The achievement of MDG goal 7 towards sanitation and safe water is uncertain in many African countries especially in for Sub-Saharan countries (15).

School sanitation means the implementing of three key interventions: hygiene, safe water, and latrines. The access to these facilities has synergistic effect that maximizes the benefits in terms of health care gain (16-19). The integration of these key areas, however, is lacking in our present assessment. None is satisfied when even the requirements are evaluated separately.

This study focused on the gross indicators of WASH facilities' availability which measures the potential access. However, it did not address the used of and the quality of WASH facilities of the study. We understand utilization of WASH facilities and attaining clean school environments are the ends to intervention in hygiene and sanitation. The presence of WASH facilities does not

however, guarantee that utilization without including their clean handling. We suggest the integration of access to hygiene, safe water and sanitation facilities in schools by the concerned, such as school authorities and those working in WASH related activities.

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References

1. Ministry of Education Ethiopia. Education Sector Development Plan. [cited 2010 December]. Available from: URL:http://www.ethiopia.gov.et/English/MOE/Resources/Documents/e_indicator1993.pdf.
2. Ministry of Finance and Economic Development Ethiopia, Performance Evaluation of the First Five Years Development Plan (2006-2010) and Growth and Transformation Planning (GTP) Next Five Years (2011-20015). A draft document for discussion with the Regional/City administrations. Addis Ababa, July 2010.
3. Ministry of Finance and Economic Development (MOFED), Ethiopia. Ethiopia, Growth and Transformation Plan (GTP), 2010/11-2014/15. Addis Ababa; MoFED, 2009.
4. United Nation. Millennium Indicators Database. 2004 [cited 2010 Sept 11]. Available from: URL:<http://www.un.org/special-rep/ohrlls/ldc/MDGs.pdf>.
5. UNICEF, Ethiopia. National school water supply, sanitation and hygiene education situation in Ethiopia (School WASH). Addis Ababa; UNICEF, 2007.
6. Federal Ministry of Health, Ethiopia. Guidelines for environmental health services in school settings (Amharic Version). Addis Ababa, Ethiopia; Hygiene and Environmental Health Department, 1996.
7. WaterAid. Sanitation provision in Benishangul-Gumuz Regional State (BGRS) schools: Girls and women's Experiences. 2005 [cited 2013 Jan 26]. Available from: URL:http://www.wateraid.org/documents/plugin_documents/school_sanitation.pdf.
8. Nomfundo M. Integrated school sanitation programming, in 25th WEDC Conference on integrated development for water supply and sanitation. Addis Ababa, Ethiopia; 1999.
9. Ministry of Education. WASH in schools country profile, Zambia. 2009 [cited 2013 27 Jan 2013]. Available from: URL:<http://www.washinschoolsmapping.com/projects/pdf/ZambiaWinCountryProfile.pdf>.
10. Ministry of Education, Malawi. Malawi school WASH 2008: A status report on water, sanitation, and hygiene in primary schools. 2008 [cited 2013 Jan 26]. Available from: URL:<http://www>.

- washinschoolsmapping.com/projects/pdf/MalawiNationalWASHinSchoolsReport2008.pdf.
11. WaterAid. School sanitation and hygiene education program "Investment in building children's future" block Jakhora, District Lalitpur, Uttar Pradesh: A joint effort of: European Union, Water Aid India & Sambhav Social Service Organization. 2007 [cited 2013 Jan 26]. Available from: URL:<http://www.sambhavindia.org/completed/SSHE%20Lalitpur.pdf>.
 12. Alembanchi M. Assessment of school sanitation, water and hygiene as a critical component of education outcomes: Comparative study of rural and urban schools in Dire Dawa City Administration, Ethiopia. MPH Thesis: Gondar University, 2010.
 13. Federal Ministry of Health, Ethiopia, Health Sector Development Program (HSSP) IV 2010/11 - 2014/15. Addis Ababa, June 2010.
 14. Federal Ministry of Health, Ethiopia. Community led total sanitation and hygiene (CLTSH) implementation guideline. Addis Ababa; November, 2009.
 15. United Nations, The Millennium Development Goals (MDGs) report 2011. Geneva; WHO, 2011.
 16. Fewtrell L, Colford JM. Water, sanitation and hygiene in developing countries: interventions and diarrhoea--a review. *Water Sci Technol* 2005;52(8):133-42.
 17. Fewtrell L, Kaufmann RB, Kay D, Enanoria W, Haller L, Colford JM. Water, sanitation, and hygiene interventions to reduce diarrhoea in less developed countries: a systematic review and meta-analysis. *Lancet Infect Dis* 2005;5(1):42-52
 18. Esrey SA, Habicht JP. Epidemiologic evidence for health benefits from improved water and sanitation in developing countries. *Epidemiol Rev* 1986;8:117-28.
 19. Esrey SA, Potash JB, Roberts L, Shiff C. Effects of improved water supply and sanitation on ascariasis, diarrhoea, dracunculiasis, hookworm infection, schistosomiasis, and trachoma. *Bull World Health Organ* 1991;69(5):609-21.