



Determining Appropriate Entry Point for Health Promoting Schools Intervention in Nairobi's Informal Settlements

Introduction

Nairobi's informal settlements (slums) are characterized by high levels of child morbidity and mortality, and poor academic performance. The Health Promoting Schools (HPS) initiative aims to improve the health of school communities, as well as the academic performance of students, using a major health need as an entry point for the intervention. A policy drafted by the Kenyan Government supports this approach. The "School Health Policy" document which aims to provide a national framework for integration of health and education through school-based interventions will be launched soon by the Kenyan Ministry of Education (MOE) together with the Ministry of Health (MOH).

This study is based on a baseline needs assessment for planning an entry point for the implementation of a HPS initiative and its evaluation in two informal settlements in Nairobi, Kenya. 22 primary schools located in two slum communities in Nairobi participated in this cross-sectional study. Data was collected from head teachers, individual teachers and classes 5 and 6 students using different questionnaires. Main study outcomes included school health profile, teachers' training on health issues and engagement in Health Promo-

tion (HP) in class, and students' healthy behaviors and nutrition status.

Findings

Shortage of public schools in the slums leads to crowded classes in nearby public schools

Korogocho and Viwandani are densely populated informal settlements with access to a limited number of public schools – Korogocho has two public schools while Viwandani has four public schools within or adjacent to the settlements. Therefore, many pupils do not enjoy the free primary education implemented through public schools as they attend in-formal schools that charge fees and lack study materials. The demand for public schools is higher than the supply, and this results in a high student-teacher ratio in nearby public schools (53.6), which is significantly higher than the ratio in non-formal schools (33.9) in community schools and (26.5) in private-owned schools.

More than half of teachers in the in-formal schools are not qualified for teaching

Teachers in public schools are employed by the Teacher Service Commission (TSC) and are mostly qualified for teaching, holding one of the following certifi-

cates: P1, P2, Graduate (GRA), Approved Teacher Status (ATS) or Early Childhood Development Certificate (ECDE). Nearly all teachers in Korogocho and Viwandani public schools have teaching certificates. In the community schools, the situation is different, as only 27.3% of the teachers in Korogocho and 55.6% in Viwandani, have teaching certificates.

Teachers report insufficient training in health related issues and lack of tools, knowledge and skills

In both public and in-formal schools, teachers reported insufficient level of training in health related issues. The highest level of training was found in HIV/AIDS and the lowest level in prevention of worm infection. Training had a positive association with the teacher being engaged in HP in the school, as higher training was associated with higher level of engagement ($0 < 0.05$).

Public schools enjoy better school health profile than in-formal schools

School health profile was evaluated taking into account various school characteristics including the school's health policies, structure, environment, community involvement, health-related programs and topics integrated into the curriculum and extra-curriculum activities. The mean score for the public schools was 16.7 points out of 30 possible points, compared to private schools with 14.5 points and community schools with 10.5 points ($p < 0.005$).

Specific characteristics of school environment and programs:

- All public and private in-formal schools have connection to water system, but only 66.7% of the community in-formal schools enjoy running water.
- The average number of students per water point was 272.1 while the



An underway toilet construction in one of the in-formal schools in Nairobi slums.



A block of toilets and a water point in a public school in Nairobi.



standard set by Ministry of Education is 50 students per one water point. Similarly, poor sanitation conditions were found in relation to the number of students per toilet. The standard is 1:25 for girls and 1:30 for boys, but in the schools studied, the ratio for boys and girls was equal 1:84, about 3 times the recommended ratio.

- Only 3 schools reported occasional provision of soap for washing hands, but during the research visits to the schools, no soap was available at the water points.
- Most of the children in Korogocho (81.8%) are dewormed by one of the non-governmental organization working in the settlement, while only 54.5% of Viwandani children are dewormed.
- 63.3% of the children in Korogocho and 90.9% in Viwandani get lunch through a feeding program. About half of the schools with a feeding program get contributions from parents, implying that the sustainability of program is not guaranteed.
- Only 18.2% of schools in Korogocho and 36.4% in Viwandani have electricity.

School feeding program is not associated with children nutritional status

7% of students were identified with moderate or severe underweight condition. Despite the expected effect, no association was found between the nutritional status of the students and the availability of feeding program in their school.

Students reported risky behaviors in areas of personal hygiene and nutrition

- 89% of the children do not wash hands with soap when in school and about 40% do not wash hands with soap when out of school.
- 30% of children do not brush their teeth in the morning and 70% do not brush at night.

- 35% of children do not eat breakfast before coming to school.
- 25% of children never or hardly eat vegetables and 32.5% of children never or hardly eat fruits.

Teachers and students in the in-formal schools are happier in school

Teachers working in in-formal schools were found to be more satisfied and happy in their work than their colleagues in formal schools. Same goes for students in in-formal schools, who reported being happier, more attached to school, and predicted improvement of their academic performance.

Head teachers, teachers and students expressed the need of intervention in the area of personal hygiene and healthy nutrition

Head teachers, teachers and students were asked to prioritize the needs of their school. Students and teachers identified personal hygiene as the most urgent need, followed by healthy nutrition. Head teachers identified the same areas as the major needs, but in a reverse order: Nutrition was identified as the first need followed by personal hygiene.

Entry Point for Intervention

This study on which this policy brief is based used a comprehensive need assessment data collection, looking at the three levels:

- School as an organization, using data collected from interviews with head teachers and evaluation of school environment.
- Teacher level, using data collected through questionnaires filled by all school teachers.
- Student level, using data collected through questionnaires filled by students from grades five and six in each school.

This comprehensive need assessment has facilitated the determining of an en-

try point for interventions to promote health promotion in schools based on needs expressed by the community and actual needs found by the survey.

Conclusions

A comprehensive need assessment is an effective tool for determining the entry point for interventions and is strongly recommended to be administrated prior to any program planned by government and organizations. Based on the findings of this study, the entry point for the Health Promoting Schools intervention will be personal hygiene with a focus on washing hands with soap, as personal hygiene was expressed as a major need by all stakeholders in the schools; the poor sanitary conditions in schools do not enable children to wash hands with soap, and so most do not wash hands with soap. The effectiveness of such an intervention has been well documented in other studies, which have indicated that washing hands with soap is one of the most cost-effective ways to prevent disease. The intervention will be based on the principles of Health Promoting Schools and comprise of environmental changes including upgrade of water facilities, relocation on water points to allow washing hands after using the toilets and before eating, and provision of soap for washing hands. Health education focusing on personal hygiene will be integrated into curricular and extracurricular activities that involve parents and the whole school community. Training of teachers in health related issues and life skills, is an essential component of the intervention.

The situation presented in this study emphasizes the great need for a health promotion intervention in schools in the slums. This will upgrade the physical facilities, increase teachers' readiness to deal with health promotion, and enable children adapt healthy behaviors. Meeting these goals will hopefully improve the health status of the children and gradually result in higher academic achievements.