

# Can Hygiene be Cool and Fun?

## Insights from School Children in Senegal

A research project conducted among primary schools in Dakar suggests that relatively simple low-cost interventions can have far-reaching effects in improving children's hygiene practices. This is provided that they take into account motivational factors and children's sensitivities in relation to toilet practice and personal hygiene.



## Summary

**This field note summarizes formative research that looked at motivating factors underlying the behavior of Senegalese primary school children. Specifically, the research looked at what motivates children in this age group to adopt hygienic hand-washing and toilet practices, and how this understanding can inform the design of simple yet effective sanitation and hygiene programs in schools. Whilst school sanitation and hygiene programs have existed for a long time, there has been no common route to designing programs that have a lasting impact on hygiene behavior both for children and their homes.**

**To develop communication programs targeted at primary school children, the first step was to gain a better general understanding of this age group, their habits, their motivations and their world. Innovative tools were used to gather insights from children, and for once, children's voices on sanitation and hygiene were heard. The researchers discovered some of the children's reasons for not doing what adults expect of them.**

**We see how essential it is to systematically explore the child's point of view if we are to design effective hygiene and sanitation interventions for schools, and we explore how this can be done simply and cheaply.**

**The research was carried out by the Hygiene Centre of the London School of Hygiene and Tropical Medicine in collaboration with UNICEF Senegal, WSP Africa and The National Office of Sanitation in Senegal.**



We like our schools and we would like to stay here.

## Why schools? Why toilets and hand-washing?

By encouraging millions of school children to practice key hygiene habits that are likely to be taken further into adulthood we contribute to two of the Millennium Development Goals – Education and Health.

School-aged children in developing countries account for up to half of the population (Bennell 2002). In Senegal 47 percent of the population is under 15 years of age, and 84 percent of children in this age group (5-14 years old) are attending primary schools (Senegal 2004; World Bank 2004). Whilst schools are undoubtedly places of information sharing and character building, they are also places of socialization where children interact with peers to practice the social skills that will be useful for the rest of their lives. Schools represent a vital part of children's social lives.

Better hygiene and sanitation in schools contributes to making education enjoyable – so helping to retain pupils in the education system, and to meet the goal of Universal Primary Education. Governments are making huge contributions from national budgets to improve education (up to 40 percent in Senegal), however schools are still being constructed without toilets.

Over 50 percent of schools in rural Senegal lack toilets and water. By positioning hygiene and sanitation in schools higher on the political agenda, pressure from parents and communities that schools are no longer constructed without toilets and water is likely to be stimulated.

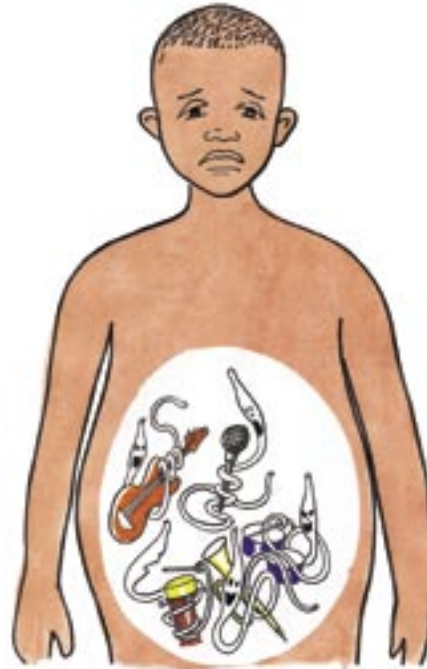
Knowledge is not the only thing being transmitted in schools, diseases are as well. The primary school age group (approximately 5-14 years old) has often missed out on public health programs, which tend to focus on infants under five years. School-aged children suffer from debilitating diseases that cause suffering and reduce the effectiveness of education.

Diarrhoeal and respiratory infections, hepatitis A, urinary tract infections, constipation and intestinal worms have detrimental effects on children's cognitive and educational achievement (Koopman 1978; Nokes, Grantham-McGregor et al. 1992; Rajaratnam, Patel et al. 1992; Bundy and Guyatt 1996).

These diseases can be linked to absenteeism and lack of concentration, which can lead to repeating of classes or even dropping out from school. These diseases are all linked with poor hygiene both in and out of the school. The evidence suggests that the two key preventive behaviors are the proper use of school toilets, and hand-washing with soap after the use of toilets and before eating.

### What is the rationale behind this new approach?

Getting children to practice hygienic behaviors, in the presence or absence of sanitation facilities, is not that simple. School hygiene programs have existed for a long time and hygiene and sanitation messages are often included in the formal curriculum. Although health and hygiene education in schools may increase children's knowledge about disease, this rarely translates into



School children suffer heavily from intestinal parasites, which has a huge impact on their educational experience

children practicing hygienic behaviors (Bartlett 1981; Biswas, Roy et al. 1990).

Although educating children about hygiene is important, it is not sufficient for behavior change. We need to add a component focused on children's motivations to the awareness foundation that education already provides, and to support this we need to create school environments conducive to hygienically safe behavior.

### Getting insider information on hygiene – the use of formative research in Senegal

Whilst the use of formative research to design hygiene programs is well established (Curtis 1997, Handwash

handbook 2005), little is available to guide us in carrying out formative research with children in schools. Conducting observational research among children, especially in busy settings such as primary schools, requires different research skills to the interviews and focus groups routinely used with adults. To produce valid results when working with children, the methods must correspond to their interests and capacities, and work within the delicate institutional structure of a school.

This field note proposes a formative research process, comprised of a breakdown of the various methods used, in order to obtain some answers about children's motivation and experience in relation to hand-washing and toilet hygiene. This information will then inform a hygiene promotion program for schools. Ideally this initial research phase should take four weeks and should then guide the design of the hygiene promotion program.

All school hygiene programs whether at district or national level, could benefit from a month of initial investigation to make their behavior change programs more effective. This could be done with a minimal sample of schools in the intended areas of deployment of the hygiene promotion programs.

The work we report on here was carried out over 12 months. It included the development and testing of many techniques being used for the first time in Dakar primary schools. Dakar was chosen as a study site because most



schools had access to water and toilets, and the emphasis of the study was on understanding behavior once facilities are in place. The three main questions that the formative research in schools aimed to answer were:

1. What are both the obvious and the hidden sides of hygiene behavior in schools?
2. What makes children want to use their school toilets and wash with soap?
3. How can we better understand children's busy agenda and how to communicate with them?

Here we look at our research approach, both in terms of the challenges faced in relation to observing and getting responses from children and the methods and indicators used.

In relation particularly to the first question (*What are both the obvious and the hidden sides of hygiene*

*behavior in schools?*), the physical settings of schools made it particularly difficult to carry out research: social interaction is complex and a lot of peer interaction is carried out far from the watchful eyes of adults within the schools. Two sets of research tools were used: standard ones to capture key indicators and a second set to capture less visible aspects of the child's world.

The standard methods included the use of structured observations and checklist observations to assess the state of sanitary facilities and their use. Indicators such as ratio of pupils per toilet, smell, flies, and the presence of anal cleansing materials and soap were used. These indicators helped, for example, to differentiate between functional and non-functional toilets and to get measures of actual behaviors. To understand the hidden side of school hygiene we developed tools

**Box 1: Whom do children regard as role models?**

To change children's behavior we need to understand it. Children are not 'little adults in the making' who model their behaviors after their parents or some educational authority. Often they follow their peers. Working out how best to 'fit in' in their classes and friendship groups shapes a big component of their social lives.

that could be employed by the children themselves and were fun for them to use. The children reported their findings in forms that included drawings and photographs.

In trying to understand the motivational factors in children's hygiene, which was related to the second question *What makes children want to use their school toilets and wash with soap?*, we noted that formative research with adults has found behavior trials to be a good way of understanding hygiene motivation. This is important not only to capture individuals' (pupils' and adults') opinions about these behaviors, but also to understand the collective experience, which is likely to give us the key possible motivations for sustainability.

In Dakar, the behavior trial was carried out in two public schools for a period of one week. Other than the staff/teachers of the participating classes the rest of the school was not informed of the changes that were being planned. Upon return from the Easter break, the school's communities came back to see the following changes:

- a. A hand-washing stand placed in front of each classroom: this was



Adults need to understand that children may value material things, such as gadgets, because it helps them to fit in with their peer group.

at the right height for the children and had a prominent soap holder. Each grade received a different color hand-washing stand and it was emphasized to the class that this was their possession. During the course of the week, two brands of soap were used. “Marabou” a non-perfumed, 250-gram cake of white soap was used for a three-day period and a green 125-gram cake of “Lux” beauty soap with a strong fragrance for another three-day period.



An example of the different color hand-wash stands developed for the behavior trial.

- b. Clean and nice smelling toilets: The cleaning staffs were given a bonus for cleaning the toilets twice daily – every morning before the pupils arrived and after the break. Water buckets were put in each cubicle for anal cleansing and flushing the toilets. Local incense “thiouraye” was burned in the toilets during the trial week.
- c. An intensive awareness campaign was carried out in the schools during the behavior trial week. Banners were designed by the children with the message: 'Hand washing with soap is in' in two local languages *Lavage des mains* or *Mo ko yorr*. Posters on hand-washing were distributed in each classroom. Each classroom received a visit from the research team accompanied by the head teacher to explain the objective of the week and to remind the children about the importance of hand-washing and demonstrate how to use the stand.

At the end of the week, we held a debriefing, where children could express their opinions about what they had liked and not liked in the trial. A group debriefing also took place in the form of a drama. Children staged a press conference where they played the roles of government figures or skeptical journalists. A lively hour-and-a-half long debate took place in front of the whole school. Adults working in the school were given an opportunity to express their opinions about the sustainability of continuing these practices and replicating them elsewhere.

The third component of the formative research in schools was related

to question 3: *How can we better understand children's busy agenda and how to communicate with them?* This required a detailed knowledge of children's busy days, including finding out the things that matter most to them. Children made diaries, which summarized their busy schedules. To gain an understanding of how children are affected by consumerism in terms of aspiring to particular styles of dress, music, food, and 'hanging out' places we gave them a fake 10-pound note and asked them to list what they would spend it on. Knowing what children spend their money on makes it relatively easy to find out what consumer goods are important to them and how best to assimilate hygiene into messages or activities associated with these items.

### Key insights from the formative research

The study revealed that schools are social worlds in their own right, with social dynamics that it is crucial to understand if we are to develop strategies for better hygiene promotion programs in schools. Here we describe and discuss the most important of the key insights.

#### **a) Contradictions between what adults want or think and what pupils need**

Adults sometimes blamed poor upbringing or the 'fundamental dirtiness of kids' for poor hygiene practice in schools. Discussions with children gave a different perspective. We found that the children were very much aware of the deplorable state of the sanitary facilities made available to them. They



noticed the difference between the upkeep of adults' and pupils' toilets. Among their responses and alternatives to using dirty toilets, were to use the facilities in nearby houses. Another response was to misuse the existing facilities, for example, pupils may defecate at the door rather than entering the cubicles. Sometimes, to express their frustration at adults' lack of interest in pupils' hygiene, they throw garbage into the toilets. Graffiti on toilet walls often made derogatory comments about the people in charge of the school toilets.

The research revealed a wide range of reasons why pupils avoid school toilets. They are associated with immorality and danger, including the presence of snakes, concentrations of filth, sexual experiences, rapes and drug exchange. A major concern was to avoid the disgust and embarrassment of stepping on faeces. Children used many negative words to describe their experience of using school toilets, such as 'going to war'. They also compared it to their fear of exams.

**b) No culture of hand washing in schools**

The study revealed that a culture of hand-washing does not really exist in primary schools in Dakar. Only ten out of the 100 schools made soap available to pupils. While provision of soap is crucial for hygienic hand-washing, the authorities struggle to find solutions to the theft or loss of soap. Out of 3,797 pupils observed, only seven percent washed their hands with soap after using the toilet. Rates were similar for boys and girls.

Although children did not generally practice hand-washing with soap, they knew all about the health problems associated with not washing their hands. In their essays, most of the children correctly mentioned the critical times for hand-washing (before eating and after using the toilets). Although diseases were mentioned often by pupils, their concerns were primarily related to the fact that this could result in medical bills for their parents, and that

being ill would mean they would miss school and not see their friends.

**What would make kids want to wash their hands with soap?**

The debriefing following the behavior trials found that children were highly motivated to wash their hands. The following reasons, which included conformity, sensory benefits, fun, disease avoidance and getting better marks (because their books were cleaner), were given for washing their hands:

- *If everybody is doing it, why not me? Conformity with what others are doing:* during the week of the behavior trial, no child wanted to be left out and all washed their hands at the specified times. Because classes had their own facilities they looked after them and the soap was not stolen (the soap provided in the communal toilets generally disappeared after the second day).

**Table 1: Summary of methods and objectives**

Objectives	Methods
1. Finding out risk practices amongst pupils and in schools regarding hygiene	<ul style="list-style-type: none"> <li>• Checklist observations look at the infrastructure and supplies made available in schools (water, soap, toilets)</li> <li>• Structured observations to measure children's actual hand-washing behaviors at key juncture points (after using the toilets and before eating)</li> <li>• Research carried out by children themselves amongst their peers through drawings and photos</li> </ul>
2. Understanding children's motivations for adopting hygienic practices	<ul style="list-style-type: none"> <li>• Behavioral trials in schools: design of an intervention to identify the motivations that pupils may have for carrying out the desired behaviors</li> </ul>
3. Understanding how to best to communicate hygiene-related messages to children	<ul style="list-style-type: none"> <li>• Diaries: record children's busy agenda and find out when best to communicate with them</li> <li>• Fictional shopping exercise using a fake 10-pound note: to record children's preferences and what they consider to be 'cool'.</li> </ul>

## Box 2: Stories illustrating differences in the perceptions pupils and adults

### The chain accident: maintenance or avoidance?

In one school, the pupils were found to be in obvious disagreement with the adults. In an attempt to keep the school toilets clean, the school management had put a lock outside each cubicle to stop outsiders from using the toilets after the pupils had gone home. However, some boys found it really amusing to lock children into the toilets. In that particular school, pupils had to pair up to go to the toilets, or to race through to avoid being locked in.

### Do I have to show the whole class that I have to go to the toilet?

In another school, parents complained that pupils kept losing their knickers and the school management had found soiled knickers in the toilets. During the drawing sessions the pupils finally revealed that it was shameful to ask for toilet paper in front of the whole class before going to the toilet. The adults wanted to avoid toilet paper wastage, but it created shame amongst pupils. Hence the children resorted to using their underpants in place of toilet paper.

- *My hands smelled nice:* Children were really keen to have nice smelling hands and they preferred the fragrant beauty soap to the odorless soap. One month after the behavior trial was carried out, in one of the classrooms school children got together to contribute to replacing the soap – they bought the beauty soap rather than the cheaper local soap.
- *The fun attributes of the hand-washing facilities and soaps:* Children enjoyed trying different colored and shaped soaps, which encouraged them to use soap to wash their hands. They suggested that school soap should come in many shapes and colors.
- *Avoiding diseases means more time with friends:* Pupils were concerned about disease, primarily because it would mean missing precious time with their friends rather than because they were afraid of being sick.
- *Clean hands mean clean books, which mean better marks:* Children were very worried about losing marks, because without hand-washing facilities, it was hard to keep their notebooks clean.

### c) Just because facilities exist, it does not mean they are functional

The study revealed that although most schools had some sort of sanitary facilities, they were often not functional. One problem was the high pupil/ toilet ratio. While the World Health Organization recommends about 30 pupils per toilet, some schools had one toilet for up to 800 pupils, with a median of 85 pupils per toilet. This caused long queues during breaks and had an impact on hygiene. Although school authorities would report having a substantial number of toilets, upon inspection it was evident that many could not be used, some cubicles had no door, some were fouled with several

days' excreta and some toilets could not be flushed.

There were also privacy concerns, with some facilities not separated by gender, causing great embarrassment especially for adolescent girls. Few toilets had cleaning agents or anal cleansing materials. Whilst the pupils' toilets were dirty and in a state that did not encourage use, teachers' toilets were often of better standard. On average there was one toilet per seven teachers. Sometimes schools had not built any toilets for teachers so one of the pupils' toilet blocks was appropriated.

### d) Problems with assuming responsibility for the operation and maintenance of school toilets

Central to the study findings was a lack of role definition when it comes to institutionalizing the operation and maintenance of school toilets. Although

## Box 3: Why don't children wash their hands?

When children were asked why their peers did not wash their hands they suggested stubbornness, the rush to go to breaks, the time it takes from their playtime and the state of the toilets. They explained that stubbornness arose from not wanting to do what they were told by adults. According to them, hand-washing is an activity done alone, which takes time away from fun activities with friends. They said that the toilet/washing facilities are scary places that smell bad so they are in a rush to get out, and prefer not to linger to wash hands.

the study revealed that the official job description of the head teachers includes defining systems for operation and maintenance, in practice head teachers are not evaluated on that criterion, which leaves the issue of school toilets unresolved.

The study revealed that in the few schools where they did maintain clean toilets the head teacher had organized solutions. These included hiring the wife of the guard to clean them and collecting daily tax from school food vendors towards hygiene. The head teacher sets the tone and decides whether hygiene is important in a school. Female heads, on the whole, took more trouble to ensure that toilets were clean and separated by gender. Parents and education inspectors never visited toilets when assessing school performance. Although cleaners were sometimes appointed, these roles were often political sinecures, and no cleaning was expected or took place.

### e) Water availability and affordability

Issues associated with the availability of water and the ability to pay for it are central. Water bills are not subsidized and schools often have to raise internal funds to settle them. Although water was available in all the schools surveyed, many of them tried to save money by, for example, choosing to open only one tap for up to 1,000 pupils, and limiting hygiene practice.

### f) Motivating teachers

Teachers' motivations for encouraging children to wash their hands were

surprising. During the behavior trial most teachers commented on how clean the children's notebooks had become, and that they were more pleasant to read. Teachers had also realized that, although they spent several hours talking about hygiene, few pupils actually practiced the desired behaviors. They were very keen to learn how they could make their teaching more effective and how programs outside of schools would reinforce the theoretical hygiene messages that they dispense in classrooms.

### g) Separate girls' and boys' toilets

The lack of separate toilets causes great shame amongst girls and boys, as they have to meet in the toilets when they do not feel that they look or feel their best. The lack of privacy of these toilets often also means that pupils would be aware of defecation activities, which is

very shameful amongst children. This forces many pupils to wait until they return home before relieving themselves. Gender interactions amongst pupils, even at a young age, are very important and need to be taken more seriously.

### How the study findings can make a difference

The findings of the formative research have implications for the design of school hygiene programs both in Senegal and elsewhere. Here are some of the recommendations, most of which are fairly inexpensive and simple to implement:

- *Designing messages that fit each set of actors:* School hygiene depends on the motivations of different sets of actors, the authorities, the heads, the employees, the staff and the



Privacy is equally important to boys and girls



children. All have their own busy agendas and their own motivations for doing what they do. Changing a school's hygiene culture means understanding these issues and finding solutions to fit each case.

- *Position hygiene as a 'cool' attribute:* Far from being goody-goody small adults who do what they are told, children live in an intensely social world where the approval of peers is the highest goal. Hand-washing needs to be positioned not as the 'geeky' behavior that adults want from kids, but rather as a practice that can help children to be what they passionately aspire to be. Kids follow music and sports icons to find clues on how to be 'in' and hence such celebrities could help make hand-washing cool.
- *Make hand-washing fun and part of a socializing activity:* Children hate wasting socializing time on hand-washing. Activities that can make hand-washing playful and social are more likely to work in schools.
- *Use popular media, especially TV:* Mass media increasingly reaches school children around the world, providing important clues as to what is desirable or 'cool' behavior. Many children mentioned in their diaries that their most important pastime was to watch music videos. Weaving hand-washing into such media, in a way that helps children position themselves socially, poses something of a challenge but it could be highly effective, especially in reaching opinion leaders in class.

- *Reinforce the management capacities of the head teachers:* Hygiene interventions in schools too often focus solely on training teachers to pass on hygiene messages to children. However these findings show that children know the messages but can't put them into practice due to poor management of the facilities, as well as the lack of hygiene materials.
- *Find classroom-by-classroom solutions:* To a child their school class is the most important social unit after their family. Everybody knows everyone else and it is highly unlikely that anyone would steal from members of the class. If children brought one bar of soap at the start of the year, which was used only by the class, it would stay around longer. Similarly toilets could be allocated to specific

classes, where they would be responsible for making them look nice, keeping them clean and supplying cleaning materials.

- *Building a sense of pride in belonging to the classroom and the school:* Building the feeling that 'our school is the best' or 'our classroom is the best' worked to stimulate change. Inter-school and inter-classroom competition works and can help return schools' lost status as places where children are educated to be contributing citizens.

### Recommendations for further research and action:

This research project came up with some fairly straightforward recommendations to many of the issues that were identified. However the



Example of drawing by primary school pupil suggesting taps in violet and blue soaps

#### Box 4: 'Hygiene is cool in Senegal: *Mo Ko Yoor!*' – Activities planned for Senegal

- Beautiful toilet competition

This is a national inter-school competition for the cleanest and best-decorated toilets. Children could submit one piece of artwork for a mural, to be painted on the toilet walls. Parents will be invited to participate in a Mural Unveiling day. The competition will draw national political attention to the state of school toilets.

- Hand-washing fun fairs

The school fair will have a hand-washing/proper toilet use theme. Activities could include: a soap bubble competition where students try to create the largest soap bubble by rubbing their hands together with soap; and a coloring area where students can draw their ideal toilets, and musical toilets.

- Song competition

Students can submit original rap songs to their school and the winning song will be performed in collaboration with famous Senegalese Hip Hop artists (Akon and MC Solar will be solicited). The song will be released and played on radio and TV.

- Cartoon super hero

Production and transmission of an attractive, high quality TV cartoon super hero series which promotes hand-washing and has all the 'cool' attributes that children seek (rap, clothing and a gadget for dispensing soap). This could be funny and build on all we have learnt about the things that happen to school children in toilets, who could be saved by the hero.

- Letter writing campaign

Pupils could write letters to senior officials asking for better toilets and hygiene facilities. This would aim to make Government take notice of the poor conditions of toilets in schools and while teaching children about democratic participation.

- Scrub clubs

The scrub club will be responsible for assigning toilets to classes and for the organization of toilet cleaning and interior decoration. These students will receive visual identification materials such as colorful scarves, caps and a commendation certificate from the school administration.



Hygiene does not have to be boring. It can be enough fun to attract even the most reluctant children

research also led to further questions, some of which relate to schools that do not have the type of facilities we saw in the Dakar schools. Here are some of the questions, along with our recommendations for further action:

1. *Is there any point in organizing hygiene activities when 50 percent of schools do not have toilets and are situated in rural areas? Our results suggest that plenty can be done about hygiene both in schools with and without toilets and in areas where mass media may not be available. School hygiene and sanitation promotion can help create demand for facilities from concerned communities. Current investment, such as loans for water and sanitation from the World Bank, should have an earmarked fund to respond to parent/school demand for toilets and hand-washing facilities.*
2. *While hand-washing requires a lot of water and the willingness of school authorities to let pupils actually use water, the school has to carry the costs. Soap companies in public-private partnerships could adopt schools and subsidize water, soap and cleaning materials and interior decoration competitions*
3. *It is often assumed that children who learn about hygiene in schools return the messages to their families and communities. This has never been shown scientifically and could be tested in the context of a schools program in Senegal.*




The classroom is often the most important social unit after the family

4. *While we advocate the use of mass media as well as school activities in Senegal, we do not know the relative effectiveness of the two methods. The Senegal program offers an opportunity to evaluate the effectiveness of traditional schools programs, relative to more modern ones, and also to evaluate the effectiveness of mass media in relation to school-based programs.*
5. *Soap is still a problem. We do not have cheap, simple, child-friendly soaps that dispense individual portions and are difficult to take away. Soap companies should be challenged to find better solutions for schools in developing countries.*
6. *Formative research methods need further development. While our approach provided rich seams of insight about the lives of school children in Senegal, the approach needs to be streamlined, refined and tested elsewhere. We are now developing a simpler package, requiring less intensive input. This can be applied to design school hygiene and sanitation promotion programs in other countries which will assist in the development of a new generation of more effective child-focused school hygiene programs.*

## About the Sanitation and Hygiene Series

WSP Field Notes describe and analyze projects and activities in water and sanitation that provide lessons for sector leaders, administrators, and individuals tackling the water and sanitation challenges in urban and rural areas. The criteria for selection of stories included in this series are large-scale impact, demonstrable sustainability, good cost recovery, replicable conditions, and leadership.

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