

COLOMBIA - Improving School Sanitation and Hygiene Education Using Participatory Diagnosis¹

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Introduction

This paper describes a School Sanitation project in eleven schools in the Department of Cauca in southeast Colombia. A participatory diagnosis methodology was used at the beginning of the project to look at school sanitation and hygiene behaviour, so as to provide the information needed to improve direct interventions in School Sanitation and Hygiene Education (SSHE).

Background

In Colombia, 41.5% of the population is under 18: nearly 17 million young people. About 2.5 million are not included in the education system and 1.1 million live in extremely poor conditions.

It is estimated that 10 million of Colombia's inhabitants lack access to clean water supplies and 16 million are without sanitary facilities (UNICEF et al, 2000). In response to these statistics, an international programme on School Sanitation and Hygiene Education (SSHE) is being carried out in six countries, including Colombia, promoted by UNICEF and the IRC International Water and Sanitation Centre. The programme in Colombia was developed by CINARA, a research institute of the Universidad del Valle, which has been working in school sanitation and hygiene education for more than 10 years. The process involved several phases, the first being a participatory diagnosis.

Scope of participatory diagnosis

The Work

Better understanding leads to improved strategies for trainers and teaching materials. Therefore an identification of constraints and problems in the provision of sanitary facilities was seen as the first step towards developing guidelines for introducing SSHE into schools.

The guidelines took into account realities at school level, including the preferences of the children, teachers and managers. Operational strengths and weaknesses were also identified, including maintenance requirements and problems. The money and resources needed to ensure that managers could maintain facilities and activities in the long term were also assessed.

¹ The reader should be aware that this is more of a descriptive research overview focusing on SSHE research techniques than a case study on SSHE.

General objective

To validate a set of tools and methodologies used to implement participatory diagnosis in SSHE.

Specific objectives

- To identify the state of the sanitary facilities and teaching materials available in schools and the perceptions of the school community about their hygiene habits, through participatory techniques, tools and approaches.
- To establish the relationships between the different stakeholders and their perceptions of their school environment.
- To improve strategies for planning future actions in the fields of water supply, sanitation and hygiene education.

Methodology

The project has so far worked with 11 schools in three municipalities in Santander de Quilichao, Padilla and Silvia. Six of the schools are urban schools and five are rural. In all, 2,947 children were involved along with their parents, teachers and the 11 school directors.

The process involved **nine** stages:

Stage 1: Agreement

The facilitating team made an agreement with the teachers and managers of the 11 schools for the collection of the information required to identify and diagnose problems concerning sanitation facilities and hygiene education.

Stage 2: Review

The activities and strategies currently used in SSHE projects were reviewed. National and international experiences and research about useful participatory strategies were considered. This included the Life Skills approach², which promotes a teaching process through which the children develop emotional and social abilities. In an SSHE context, this approach would be a way to integrate healthy behaviours into daily life and so improve conditions for children at home and school through the learning process. (Goleman, 1996).

Life Skills in the School: school communities finding solutions by applying the 'Life Skills' approach:

Modesto, teacher at Francisco Jos de Caldas school: "In any school, any problem or trouble has causes and the causes can be identified and modified. Using this Life Skills approach we identified hygiene practices as a problem in the school. We went through a process in which we heard recommendations and thoughts about possible ways to get improvement. We did this through expanding and then applying the children's knowledge about sanitation, water supply, and hygiene in a friendly way, through games, role playing, songs. We included these themes in the curriculum and in the daily routine of the classroom."

Hernan, teacher at Libertador school: "The process carried out in the teaching of Life Skills makes it possible for us to really get to know students, teachers and, parents, their ideas, motivations and behaviours. We can then better teach hygienic habits and use of the school facilities. We participated in this process and identified, among other things, just how important the gender concept was."

² The life skills approach focuses on the knowledge, attitudes and behaviours that support people in taking greater responsibility for their own lives. It focuses on promotion, among children, of positive attitudes, and skills as well as habits for risk reduction. Life skills education recognises that it can be challenging for children to make healthy life choices, or resist negative pressure, or reduce risky behaviours.

Stage 3: Visits

Next, visits took place to the eleven schools and communities. Meetings were held with the stakeholders, the teachers, head teachers and local authorities at each school to plan an action agenda. It was explained that a diagnosis would be made of the school sanitary and hygiene education conditions, involving a participatory approach and different strategies. All the school community was to be involved, including children of both sexes, teachers and school parents. Table 1 presents the techniques used (Cinara, 2000).

Stage 4: Assessment of Services

Working with the community and school representatives, it was possible to identify contrasting perceptions held by different groups. Aspects researched included comfort, risk, use, availability of cleaning materials, operation and maintenance.

Stage 5: Plenaries

These meetings were times for thought and reflection. Issues and dilemmas were formulated, taking into account participatory diagnosis, mapping and daily routines. Discussions were wide-ranging, covering school sanitation facilities, operation and maintenance, hygiene education, nutrition, the causes and routes of diseases and the use of training materials. Different viewpoints about SSHE could be voiced and integrated.

Stage 6: Questionnaires

These were designed to gather both qualitative and quantitative information, especially from teachers, directors and institutional representatives. The findings clearly showed disparity of knowledge and lack of co-ordination in actions, as well as providing information about financing, use, operational and maintenance personnel.

Stage 7: Mapping

This was done by parents, children, directors and institutional representatives. The process stimulated discussions around risks, interests and environments in terms of the school and community, in a playful and dynamic way. Children and women managed the skills better than men.

Stage 8: Drawing

Understanding the expectations and aspirations of children through drawing was important because it allowed them to express what they could not say in speech. For children, such activities are fun and dynamic - like themselves. The drawings suggested ideas which could be used for improvements in the design of future facilities, for example, the need for more privacy, attention to environmental conditions, painting walls with bright colours. The process made it easier for children to visualise a fact: the school is a unity, which includes all facilities.

Stage 9: Sanitary Inspection

This was done individually with different school representatives, so that discussion was possible about behaviour related to the facilities. Plans were discussed for improvements needed to the facilities in the short, medium and long term, identifying the contribution of each stakeholder to improvements.

Table 1: Techniques, methods, and audiences

Topics	Children of 1st, 3rd and 4th grade	Teachers	Director	Parents
Infrastructure Facilities	<ul style="list-style-type: none"> • Service assessment • Sanitary inspection • Mapping • Drawing 	<ul style="list-style-type: none"> • Questionnaire / forms • Drawing 	<ul style="list-style-type: none"> • Questionnaire / forms 	<ul style="list-style-type: none"> • Mapping of the village showing: water supply and excreta systems, sullage, solid waste.
Benefits	<ul style="list-style-type: none"> • Benefits assessment • Plenary 	<ul style="list-style-type: none"> • Questionnaire • Benefits assessment 	<ul style="list-style-type: none"> • Questionnaire 	<ul style="list-style-type: none"> • Benefits, services and systems assessment
Hygienic aspects	<ul style="list-style-type: none"> • Service assessment • School routine • Housing routine • Plenary 	<ul style="list-style-type: none"> • Questionnaire • Daily routine • Plenary 	<ul style="list-style-type: none"> • Questionnaire • Daily routine 	<ul style="list-style-type: none"> • Daily routine • Plenary
Transmission and disease routes	<ul style="list-style-type: none"> • Plenary 	<ul style="list-style-type: none"> • Plenary 	<ul style="list-style-type: none"> • Questionnaire 	<ul style="list-style-type: none"> • Plenary
Teaching / Training Materials	<ul style="list-style-type: none"> • Plenary 	<ul style="list-style-type: none"> • Plenary 	<ul style="list-style-type: none"> • Questionnaire • Inspection of the material 	

Findings

Most of the schools were open in the mornings, with five primary-level classes. Of the 2,947 children in the schools, 1,286 were girls and 1,661 were boys, aged 7 to 14. There were 96 teachers (80 women and 16 men).

- *Drinking water*

All the schools have water supply systems, but most have problems getting a continuous and sufficient supply. Nine of the schools used connections from the municipal water supply system. In the other two schools, children had to fetch water from a nearby river or other source.

- *Sanitation systems*

Half the schools had latrines which discharged into the municipality's collective sewer system and the other half had pit latrines using on-site sewage facilities. In three of the schools, children said that open-field defecation went on because of the water supply problems. In one indigenous community open-field defecation was the cultural norm.

- *Toilets and handwashing facilities*

All the schools had some latrine provision. In all but one, the cleaning and maintenance of the toilets (and classrooms) was done by the school children, both boys and girls. Activities included fetching water from the nearest source when necessary. Pipe repairs or replacements were being done by parents or municipality personnel.

The average number of children per cubicle was 30 to 50 but in some cases it was as high as 90. Handwashing facilities were also overcrowded, seven of the schools having 30 to 50 children per tap and the rest even more, up to, alarmingly, 167 children per tap.

In four schools, the latrines were for general use by both students and teachers. Of the seven who had separate student facilities, three had latrines for use by all children. In two others, they were assigned by class, and in the other two, by gender as well as class.

Only in five schools was there mention of the presence of both soap and toilet paper. Even then, the supply was often interrupted or children had to ask the teachers for an allowance in the classroom, which made them feel uncomfortable. In the other six schools there was no soap for handwashing. This was one of the things seriously demanded by most of the children. In four of the schools there was no toilet paper either, although soap and paper are paid for by parents at the beginning of the academic year.

In half the schools, the children found the toilets acceptable; in the others they definitely did not like the toilets. In all the schools, children said that toilets could be improved and that they wanted better facilities. The most common problems in the sanitation facilities mentioned by the children were: poor ventilation/bad odour, poor lighting, the intimidating size and height of the toilets, poor handwashing facilities and urinals or a lack of these. In 40% of the schools, teachers said they did not feel comfortable with the sanitation facilities. In the rest, teachers said the toilets were in good or tolerable condition but that facilities could be improved to ensure that they offered better hygiene.

- *Health and hygiene aspects*

The diseases mentioned most frequently by all participating stakeholders were: diarrhoea, stomach pain and colic, gripe, headache and fever, skin allergies, tooth pain and general body pain. These were often attributed to environmental factors: sun and dust; a result of daily events like playing games, etc. Other causes mentioned had little relation to the actual transmission route of these diseases.

Only a few of the participants, mostly teachers and parents, mentioned the relationship of health to hygiene behaviour and habits or referred to water supply and sanitation conditions. Examples cited included: drinking untreated water or raw water from rivers, bad food management habits, and poor hygiene such as neglect of teeth or failure to wash hands before eating or after using the toilet.

- *Health Benefits*

Different actors saw benefits differently:

In the overall view of the stakeholders, the main benefits of having toilet facilities at schools were social, benefits such as comfort and privacy, then aesthetic aspects.

Children were primarily interested in space for recreation, showing little interest in sanitary facilities and the risks associated with defecation or food handling. They saw sanitary facilities mainly in aesthetic terms, mentioning cleanliness more than health. A few saw benefits in terms of a healthier environment. Several children mentioned their satisfaction at having a toilet at school to use rather than having to wait until the end of the classes to go home and use the toilet there.

Other stakeholders saw benefits more from health and environmental aspects.

- *Hygiene habits*

Understanding was gained of daily routines, essential in order to understand the hygiene behaviour in school communities.

In about 50% of the schools it was clear that children have incorporated health and hygiene aspects into their day-to-day habits. The actions they mentioned most often were

care of the teeth, showering daily and handwashing. In these schools, only a few teachers and parents failed to mention these daily routines in the context of hygiene and health. But in the other 50% of schools, only a few mentioned something like handwashing or care of teeth.

- *Hygiene Education Skills in teachers*

In seven of the schools, teachers had received some training in hygiene and health. In all schools, even those where teachers had not received training in these topics, hygiene education and sanitation were in the curriculum. They were included mainly in natural and social science courses. Teachers explored these themes during the classes using verbal explanations, small cards and posters. Teachers also brought up these topics during Parents Meetings which are frequent, since parents take a keen interest in their children's progress.

The main subjects covered were: handwashing after using the toilet and before eating, and de-worming the children.

- *Educational aid material used by teachers*

Only in three schools did children and teachers mention training materials about hygiene and sanitation. In the other eight schools there were none. Nonetheless, in almost all the schools, children expressed their satisfaction with the way their teachers explained the topics and the material they used. This consisted mainly of small booklets, songs and some games. They also used small posters to encourage the efficient and correct use of water and the need for handwashing before eating.

The teachers' perceptions were not as enthusiastic as the children's. Only in three schools did they express some satisfaction with the teaching aids on hygiene and sanitation themes.

Using the collected information

Reflecting the information back

In this phase, all the information collected during the participatory diagnosis was presented to the school communities, along with proposed actions. Adjustments were made based on feedback. This made it possible to generate effective planning tools for short, medium and long-term SSHE activities.

Other factors playing a role in designing optimal SSHE activities

The role of the following factors was recognised:

- Sanitary facilities are not yet considered to be a routine part of an overall school plan; much more attention is paid to classroom facilities than to sanitation facilities.
- Differences in the concepts of school sanitation and school health and a neglect for school sanitation within school health was shown by (a) a general resistance to allocating resources for school sanitary facilities and (b) the poor support given to teachers involved in SSHE, including monitoring and evaluation.

Sanitary facilities not properly used

Las Delicias School, in the municipality of Silvia, has a mainly indigenous catchment population. About 320 children attend. The water supply and sanitation practices of the community do not meet national criteria for quality, environmental protection, comfort and privacy. So the children are not used to latrines and tend not to use the ones at the school, especially the younger children. There have been no previous attempts to explore the point of view or desires of the local communities. The SSHE project tried to find ways to incorporate these for the first time

La Milagrosa School covers an outlying area of Santander de Quilichao municipality. Most of the population has settled there to escape violence in the rural area. The children tend to be ignorant about use of toilets, and use the open field practices of the rural areas. The SSHE project allowed activities for integration between infrastructure and hygiene behaviour changes.

In both schools, the Life Skills approach was an interesting tool for initiating behavioural changes in the community.

Children's and parents' voices

Children from class 1, Quinamay School: "Getting the water supply for the school is very difficult. Sometimes we have to carry it from the river or neighbourhood houses. The Panamerican Road is very close and is dangerous. We want to have the bathrooms closer to classrooms and under trees - this place is very hot. Because the water supply is difficult, sometimes the bathrooms are dirty and a terrible mess".

Parents of La Milagrosa School: "The biggest problem is the water supply. In our houses there is little water and it does not have pressure. In summer this problem is more critical".

Girls from class 3, Francisco Jost de Caldas School: "We do not like the boys' attitude; they look under doors when we are using the bathroom".

- Integration of SSHE into the 'Child-Friendly School' concept had not happened. The Child-Friendly School was a bigger concept than SSHE, but in reality, SSHE had achieved more. In the future, consideration of topics such as food facilities and learning spaces could and should help integrate SSHE into the Child-Friendly School concept. Likewise, the school should be more integrated into society and the community. Stakeholder groups and advocacy activities are needed to get the attention of policy-makers and decision-makers.
- It was apparent that the 11 schools selected for this study had relatively good facilities and conditions. The majority did not fall below national or international standards for the number of users per facility. It was said informally in the municipalities that the needs of other schools were much greater.

Using the findings to improve SSHE activities

General improvements

In the past, the design and construction of the facilities has not taken account of factors such as gender, privacy, comfort or the size of the children. Nor has consideration been given to integrating the operation and maintenance of facilities with the hygiene education curriculum.

As a result of the process described here, guidelines to be applied in schools are being developed. These include a formula for participation and technical guidelines for the design of sanitation solutions. It is proposed that these guidelines be incorporated at national level.

Building in Life Skills

The Life Skills approach recognises that hygienic habits, health, and well being are founded on basic human skills such as: empathy, self-knowledge, self-care, self-control and the ability to take decisions. Encouraging the development of these skills during the participatory diagnosis is particularly useful for initiating change in the parents and teachers of the school community.

Accommodating differences

There are major differences between the genders in perceiving factors such as comfort, risks, health, rights and privacy. If these are better identified and considered in the design process, better plans can be proposed and facilities will be more used and appreciated. Differences in perception also exist between children, parents and teachers and need to be allowed for when planning better SSHE actions.

Better Training

Results can inform the planning of training and training materials for teachers, using local human and material resources. In designing hygiene education materials and strategies, (role) play, music and hands-on activities are preferred to more conventional approaches.

The decision-making process

Involving the school community in the decision-making process allows them to define their financial, technical and institutional responsibilities at local level, contributing to a regional and national process of decentralisation.

Links

This pilot research project has caught the interest of other organisations. For example, Plan International is going to use its results in initiating a Child-Friendly Schools project in one of the municipalities. In addition, the results of this research and the work with UNICEF will be incorporated into another project that UNICEF is carrying out in 120 schools in Colombia, in which SSHE will be one of the most important aspects.

Conclusions

- This programme has developed a strong, child-centred participatory approach. It is also a decentralized approach, focusing on the districts, and this provides great opportunities for further expansion of the programme. Tools and methodologies need to be finalized and validated by demonstrating that they can strengthen the outputs of the programmes, particularly infrastructure and training tools.
- The schools are communities made up of different actors: children, parents, teachers, directors. Exploring their motivation, thinking and perceptions about SSHE improves both planning and activities. It is well worth doing. The children find it easy to express their

enthusiasm for progress in their school. Such clear and steady vision, capable people and a well-adapted approach are necessary to meet the next phase of challenges: design, construction, operation and maintenance.

- The process described in this paper generated a lot of expectations. The main hope is that common and participatory solutions will be found for problems identified. Informed people working together can build a child-friendly school.
- The majority of the schools in this study were not below national or international standards for the number of students per facility.

Summary

The project was carried out in 11 schools with 2,947 children in the southeast of Colombia. It used a participatory approach and drew on Life Skills to involve the population and find solutions to SSHE issues. The project gained a great deal of information about the different perceptions of parents, teachers, girls and boys concerning SSHE. The results will be used to strengthen future projects in the region.

Sources of information

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