

# We love our school toilets: involving primary school students in improving their school toilets

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**Abstract:** This article reports on the planning, implementation and evaluation of an intervention to improve school students' experience of using the school toilet in a primary school in Melbourne, Australia. 20 students from grades 2–6 participated in focus groups, to discuss what they valued about the school and raise awareness of issues they were not happy about. A common theme from all of the focus groups was that students reported avoiding use of the school toilets. Using the ideas generated from the focus groups, the student council (with input from staff), developed a self-administered pre- and post-test questionnaire. This was given to 220 students in grades 1–4, aged 6–10 years. Improvements suggested by the students were made to the toilet block, and then a post-test was administered. Independent *t* tests were conducted. The pre-test indicated that 71% of girls and 65% of boys feared the behaviour of other students in the toilet. Overwhelmingly, the qualitative comments focused on poor student behaviour in the toilets, with lack of privacy due to student misbehaviour mentioned in 90% of the comments. After the toilets were revamped, the greatest gains were made in students' attitudes toward the toilets, with a 37% increase in students who indicated they now liked the toilet facility. Incidents of vandalism also decreased; however, student misconduct in the toilets was still regarded as a problem. Involving students in refurbishing their toilets improved how students viewed the toilets and reduced vandalism; however, a different intervention is required to change inappropriate behaviours in the toilet. (Global Health Promotion, 2014; 21(1): 23–28).

**Keywords:** bathroom, behaviour, children, educational settings, focus groups, health promoting schools model, health promotion, misconduct, participation, primary school, privacy, school design, student, toilet

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## Introduction

Bayswater North Primary School (BNPS) is a medium-sized primary school of 490 students, in a lower socio-economic community situated in the outer eastern suburbs of Melbourne, Australia. For the past five years, BNPS has been using the health promoting schools model, taking a whole school approach to the promotion of health and welfare. This approach goes beyond the learning and teaching in the classroom, to pervade all aspects of the life of a school (1).

In March 2011 three focus groups were conducted, consisting of 20 students from grades 2–6. Students were asked what they liked best about the school and what things they would like to see changed. A recurring theme to come out of the focus groups was that students did not like the school toilets. Teachers also reported issues within the student toilets, with toilets unflushed, graffiti on the walls, toilet paper on the roof and floor, and children playing in the toilets.

Literature attests that this is not an isolated problem, but one common to many schools.

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Students in a number of studies report that they do not like using the school toilet, due to issues such as unpleasant smells, sights, bullying and insufficient facilities (2–4). Other studies report that school nurses found a failure in many schools to provide adequate facilities (5,6) or that, due to student numbers, toilets were under pressure from overuse (6). Poor school toilet facilities are linked to outbreaks of viral gastroenteritis (7). Access and conditions of school toilets are also linked to urinary incontinence (8,9). School-age children's toilet habits have a behavioural and social component, due to emptying their bladders between 3–8 times per school day (10). If healthy voiding habits are to be established, adequate toilet facilities that the students are happy to use, along with permission to use the facilities when they need them, are essential (9–12).

A number of studies show that school participation is associated with improved school perception, as well as positive health and wellbeing (13–18). It is also reported that including students in school toilet design can have a significant impact, from the students' point of view (14). Participation and democracy are core values for health-promoting schools (19); therefore, BNPS encourages its students to participate in improving the social and physical environment of the school. It has been demonstrated that students require guidance and direction (14,15). Therefore, the British website, 'Bog Standard - Better toilets for students, UK' (20) is shown to the students to elicit conversation and generate ideas in regard to toilet renovation.

There are a number of studies on the state of school toilets, students' access and perception of the toilets, their relationship to incontinence and infection, and the importance of good facilities. None of these articles detail interventions to rectify the problems. The British website, 'Bog Standard - Better toilets for students, UK' (20) and the Toilet Tactics kit (21), produced by the Continence Foundation of Australia, both provide ideas and information to improve toilets at schools and include some case studies; however, they do not detail any research on the interventions. This article describes the planning, implementation and evaluation of a health promotion programme to improve the toilets in a local primary school.

### *Ethics*

This study was approved by the BNPS principal. The school student council played an active role in the study, designing the questionnaire and collecting the data, as well as having involvement in the intervention. The Department of Education and Early Childhood (DEECD) of Australia states that 'studies undertaken by primary and secondary students within their own or neighbouring schools do not have to complete an (ethics) application' (22).

### **Methods**

The tools we used to collect the data included focus groups, discussion groups with the student council and a written survey. An action research methodology was employed (23,24) and the student council was involved in managing the project (25).

A total of 20 students from grades 2–6 participated in focus groups of 10 each. These students were randomly chosen by their class teachers. The students were asked what they liked best about the school and what they would like to see improved. Toilets came up as an immediate issue.

I don't like to use the toilets. I try to hold on until I have gone home. (Grade 3 male)

People look over the wall and sometimes toilet locks are broken. (Grade 4 female)

Thematic analysis was conducted manually (26) by the health promotion officer, assistant principal and members of the health promoting schools committee, which is made up of parents and teachers. The themes were presented to the school student council in May 2011. The council selected the junior school toilets as a project for discussion and suggestions ensued.

At the second student council meeting in June 2011, the council decided to survey those grade 1–4 students who use the junior toilets that were nominated for improvement. A survey of closed-ended questions was adapted from the 'Bog Standard - Better Toilets for Pupils' website (20). Due to competing demands and other school activities, this project was put on hold until 2012. During this

time, the health promotion officer was able to secure a grant of AUD1500.00 to assist with re-vitalizing the school toilets.

In April 2012, we gave 123 male students and 89 female students (from grades 1–4) the seven-item survey. The survey was administered by members of the student council, under guidance of their teachers. All of the students within the selected classes became the study sample, which represented 96% of grade 1–4 students. These grades were chosen, because students from these grades most frequently use the junior toilets that were the subject of the student council project. The median age of the students was 7 years 6 months.

The closed-ended questions offered a binary yes or no choice. Also, there was the opportunity at the end of the survey to provide open-ended comments about the toilets. Independent *t* tests were conducted to test for significance.

## Results

### *Pre-test results*

Of the girls in the pre-test survey, 61% indicated that there was a problem with not enough toilet paper, whereas only 47% of boys saw this as a problem. Concerning the ability to wash and dry hands, slightly more girls perceived this as a problem, with only 38% of girls reporting that they could wash and dry; 41% of boys reported they were able to wash and dry their hands.

The most troubling issue identified by the pre-test survey was that 71% of girls and 65% of boys indicated that they feared the behaviour of other students in the toilet: 69% of girls and 65% of boys reported that toilet doors were locked by students who then climb out, making the toilet inaccessible. Just over one-half of the females (51%) indicated that toilets were not regularly flushed, compared with 33% of boys. Aggregated male and female data showed that 47% were unable to lock the toilet doors and the combined data indicated that 73% of the students did not think the toilets were nice.

Overwhelmingly, the qualitative comments focused on poor student behaviour in the toilets, with lack of privacy mentioned in 90% of the comments.

Girls climb over the doors to look at others. (Grade 2 female)

People peeking over. (Grade 3 female)

### *Intervention*

On collation of the pre-test results, discussion was held with the student council, the teacher leading the student council, the health promotion officer and the assistant principal. Within the constraints of a limited budget of AUD1500.00, it was decided to:

- Paint the internal toilet doors;
- Put murals on the outside of the boys' and girls' toilets;
- Fix the toilet locks;
- Clean and reseal the toilet floor;
- Design and put up new signs reminding students to wash their hands and flush toilets;
- Remove the dried toilet paper from the toilet ceiling;
- Regularly mention the toilets in school assembly, with reminders to wash hands and flush regularly.

The lead teacher responsible for the student council agreed to take responsibility for the project. Two competitions were announced by the school captains in assembly. The first competition involved choosing a multi-coloured scheme for both the junior boys' and girls' cubicles' toilet doors. Participants were invited to submit their ideas regarding colour schemes for the doors.

The second competition involved designing a mural for the outside of the boys' and girls' toilets. A graphic outline of a boy and girl were distributed to participants, with instructions for them to design a character for the toilet entrance. Here, 83 students participated and the winners were chosen by the junior school council and announced in assembly.

A teacher worked with the two winning students to paint the murals onto large cut-outs of cement sheeting, which were then attached to the walls outside the toilets. The toilet doors were painted in the colour schemes designed by the two winning students. Originally, it was planned that the students would be involved in painting the toilet doors; however, logistically this proved difficult. Teachers

and the health promotion officer volunteered to paint the doors. The school cleaner fixed the toilet locks and cleaned and re-sealed the floor during the school holidays.

### *Post-test results*

Eight months after the initial pre-test, when the improvements were complete, a post-test survey was conducted. These surveys were again administered by members of the student council. We used independent sample *t*-tests to compare the pre- and post-test data. There was significant improvement in the post-test for the boys, regarding access to toilet paper, but not for the girls. Also, there was no significant increase in the girls' ability to wash and dry their hands; the boys indicated that for them, there was no improvement.

For both girls and boys, there were no significant changes to the questions, 'Do you fear the behaviour of other students in the toilet?' and 'Are the doors locked by other students who then climb out?' This was the most troubling issue identified on the survey, with 71% of girls and 65% of boys indicating that they worry about the behaviour of other students in the toilet block. The second most highly ranked problem we identified through the survey was the problem of students locking the doors and climbing out, making the toilets difficult to access: 69% of girls and 65% of boys indicated this was a problem. Unfortunately, the post-test showed no significant improvement in this situation.

Qualitative comments on the post-test again focused on privacy issues. Most of the returned surveys mentioned this issue:

People see through the door cracks. (Grade 2 female)

Others look under/over the door. (Grade 3 male)

For the girls, there was no significant improvement in response to the question about toilets being flushed (49% pre-test and 52% post-test). Post-test, fewer boys reported the toilets being flushed, with a decrease from 67% reporting the toilets flushed in the pre-test down to 48% in the post-test.

Before the post-test, a number of the broken locks on both the male and female toilets were fixed. This resulted in a significant positive increase to the

question about being able to lock doors, up 20 percentage points for the girls and 26 percentage points for the boys.

The biggest gain was reported in the last question, which asked if the students liked the toilets and were proud of them. Pre-test, the aggregated male and female data reported that only 27% of the students were proud of the toilets. Post-test, 64% of students reported that they liked their toilets.

By the end of the 2012 school year, the assistant principal reported that there was no new graffiti in the refurbished toilet block, nor toilet paper on the ceiling.

### *Limitations*

We used independent *t* tests to test for significance. Ideally, the pre- and post-tests administered to the students should be coded, so the results can be paired; however, both teachers and students wanted the tests to be anonymous, and as the students were administering the tests, for simplicity, the tests were not coded. Coding would have allowed for dependent sample *t* tests to be conducted. Independent *t* tests have less power than dependent *t* tests, so using this test may have resulted in fewer significant differences being identified.

### **Discussion**

This study examined the success of a project, with student involvement, to improve the condition of a block of primary school toilets. The students raised issues about the infrastructure of the toilets, such as broken locks, lack of toilet paper and graffiti on walls; however, their main concerns were with the behavioural aspects of going to the toilet. The behaviour of other students in the toilets was raised as the most problematic issue. This has also been documented in other studies on school toilets (2–4).

Research shows that engaging the students in problem-solving and improving their school leads to increased school ownership, achievement and school pride (15–18). The aggregated male and female student data showed significant improvement in access to toilet paper for the boys, the ability to lock toilet doors and pride in the toilet facility. The areas that did not show improvement were behaviours related to questions such as, 'Do you fear behaviour of other students?', 'Are doors locked by other

students, who then climb over?', and 'Have toilets been flushed?' The students obviously appreciated the fact that the toilets now looked better; however, this did little to improve the inappropriate behaviour of children in the toilet. Teachers reported that the amount of graffiti and mess in the toilet had decreased, so it would appear that the refurbishment had a restraining effect on the students in regard to vandalizing the toilets, but not in regard to unsuitable behaviour.

Females showed less significant improvement than the males. For females, the only area that showed significant improvement was regarding the two questions about improved ability to lock toilet doors and pride in the toilets. The reasons that boys showed a significant increase in access to toilet paper and the ability to wash hands, but the girls did not, may be the sensitization of the boys to the importance of these two issues. The use of toilet paper and hand washing was stressed by the principal in a number of assemblies during this project.

There are significant differences between male and female behaviour in toilets (27,28). It is documented that males wash hands less than females, so the increased hand washing by the males may be more due to education than improved access (28). This may also explain why, in the post-test, there was a decrease in boys reporting that toilets were being flushed. As urinals, which are not flushed as regularly as standalone toilets, are available for the males, the intervention may have alerted the boys to the need to flush toilets after each use.

Students generally base their negative perceptions of school toilets on the physical appearance of the toilets and on feelings of insecurity when visiting the toilet (3). The improvement of the physical appearance of toilets was linked to a positive effect in attitudes; however, another intervention to stem improper behaviour in the toilet will be needed, if students are to feel totally comfortable in using the school toilets. Although the major concern of students raised in the focus groups and surveys was the poor behaviour of other students in the toilet, the intervention did not specifically address this issue. To make an impact on this poor behaviour, the project should really have concentrated on specific interventions to address this behaviour. A number of sites suggest the use of toilet monitors, who are placed to manage the various aspects of toilet

supervision (20,27). This may be what is required to address behavioural problems in the toilets.

## Conclusions

A project involving students in renovating school toilets had a positive effect in improving attitudes toward the toilet and reducing vandalism; however, it showed no significant improvement in other student misbehaviour in the toilets. Reducing inappropriate behaviour in the toilet will require a different, targeted intervention.

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