

Children's experiences of school toilets present a risk to their physical and psychological health

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Abstract

Objective To ascertain why children and parents frequently describe problems with school toilets.

Setting Two contrasting cities in Northern England (Newcastle upon Tyne 394 pupils) and Southern Sweden (Goteborg/Mölndal 157 pupils)

Methods Self-administered questionnaires were given to children aged 9–11 years in England and Sweden. Researchers administered questionnaires to Head teachers and recorded their observations of facilities according to predetermined basic standards.

Results Children from both countries said they found school toilets unpleasant, dirty, smelly, and frightening and that bullying occurred there. Many children avoided using the school toilets (62% of boys and 35% of girls (in the UK site) and 28% boys and girls in Swedish site avoided using the school toilets to defaecate). Results were similar in both centres.

Conclusion European standards are needed for school toilets in order to prevent children developing problems such as constipation, urinary tract infections and incontinence.

Keywords

school toilets, children, bladder dysfunction, urinary tract infection, bullying

Introduction

The topic of school toilets has been discussed frequently by English and Swedish children. Despite newer school buildings, effective detergents and regulations governing school toilets, it appears that school toilets still have inadequate standards. Avoidance of school toilets has potentially negative consequences for children, such as a higher risk of incontinence, constipation and/or urinary tract infection (UTI).

As professionals, we are aware that it is important for children to use the toilet regularly during

the school day, to encourage adequate elimination. The occurrence of UTI is a common problem in early childhood; in a study of 7-year-old children, 8.4% of the girls and 1.7% of the boys had had urinary tract infection before the age of seven. Recurrences occurred in 39% of the girls and 13% of the boys. A significant association between different bladder symptoms such as incontinence, hold pattern and urgency and previous UTI was also found (Hellstrom *et al.* 1991). This relationship is confirmed by other studies (Koff & Murtagh 1984; van Gool & de Jonge 1989; Meadow 1990; Vijverberg *et al.* 1997; De Paepe *et al.* 1998).

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Importantly, children with anomalies, malformations of the urinary tract or renal scars have an increased risk of UTI if they avoid going to the toilet during the school day (Lapides *et al.* 1972; Lindehall *et al.* 1994; Holmdahl *et al.* 1996). Avoidance of going to the toilet to defecate also increases constipation (Taylor 2000).

Previous literature about school toilets concentrated on the risk of infectious disease, commenting on the lack of basic cleanliness and the absence of health education material (Jewkes & O'Connor 1990; Joseph *et al.* 1990; Rajaratnam *et al.* 1992). School legislation in UK and Sweden focuses on the number of school toilets per child and provision of toilets for disabled pupils (see The Swedish work environment authority 1999; Department of the Environment and the Welsh office 1992; The Education (school premises) Regulations no. 360 1996).

In both the English and Swedish press there has been spirited discussion on the problems of school toilets, and many parents as well as paediatricians and paediatric nurses are concerned about the state of toilets in schools. The aim of the present paper was to elicit the views of children about their school toilets and why they disliked using the toilet at school.

Methods

Ethical approval

Ethical approval was obtained in the UK

Participants

Pupils in primary schools in Newcastle, UK and Goteborg/Mölndal, Sweden were asked to participate in the study. The selected schools were representative of different social classes. In Newcastle school performance tables and free school meals were used to indicate school social mix. Goteborg/Mölndal schools were chosen according to similar criteria. The head teachers were approached and gave their consent. The children in both countries were assured of confidentiality. The researchers also visited the school toilets on the day the questionnaires were administered to assess standards.

The questionnaires were administered to nine classes in seven different schools in Goteborg/Mölndal and in Newcastle in 10 classes in 10 primary schools. The mean age of the children was 10 years. Participants in the Swedish study were 79 boys and 78 girls, and 207 boys and 187 girls in the UK. All children filled in the questionnaire after giving informed consent. The questionnaires were administered in the class room, during allocated time and with one of the investigators present to assist pupils.

Development of questionnaires

Discussions with children and parents and visits to a variety of public toilets enabled the setting of minimum standards used to construct a questionnaire shown in Table 1.

The questionnaire (Table 2) was piloted in the UK and subsequently modified.

Analysis

The answers were individually analysed, with quantitative questions analysed by simple answer percentage and qualitative questions were grouped using modified content analysis and analysed thematically.

Results

Standards

National standards for school toilets varied in each country (Table 3) Schools in each country fulfilled these minimal standards limited to numbers of pupil per school. Minimum standards had been set in the development of the questionnaire, schools individual results are shown in Table 4. However the availability of toilets differed (see Table 5)

Table 1. Minimum standard of school toilets

Clean and in working order
Toilet paper and soap and towels should be available
All toilets should be private
All toilets should be able to be locked

Table 2. Children's questionnaire

Accessibility	Ratio of toilets to pupils, availability to disabled pupils
Hygiene	Cleanliness, dirty or clean toilets (Urine or/and faeces on seats/floor of soap/towels and toilet paper)
Behaviour in and/use of toilets	Room for open ended responses Any knowledge of intimidation/bullying if so what?
Privacy and security	Room for open ended responses Separate toilets (boys/girls) Locking toilets
Perceptions and attitudes	Room for open ended responses Do you use the toilet while you are at school? to pee and or poo?
Open ended section regarding improvements	Room for open ended responses What improvements would you like to see in your school toilets?

Table 3. National standards for school toilets

England	One toilet for 20 pupils for children over 5 years of age
Sweden	One toilet for 15 pupils for children over 5 years of age

Table 4. Standards found in school toilets in each country

Newcastle	1. Boys and girls all had separate toilet blocks. The boys' toilets consisted of rows of urinals and a couple of toilet stalls. 2. The girls' toilets were all individual, with hand washing areas within the toilet blocks in all schools. 3. In one school, 2 toilets were adjacent to each classroom. 4. All toilet blocks were indoors in these schools.
Goteborg	1. In Goteborg/Mölnadal 63% of toilets were mixed for boys and girls. 2. There were both single toilets outside the classrooms. 3. There were toilets in groups adjacent to dining-halls and junior common rooms. 4. Hand basins were located inside the toilet rooms.
English and Swedish school toilet standards	All the schools fulfilled the national recommendations of school toilet standards, limited to size and number of toilets per pupil

Table 5. Toilet availability

Newcastle	All the toilets were available for pupils
Goteborg	Some toilets in one single school in Goteborg/Mölnadal were closed to reduce cleaner's work

Financial constraints

Financial constraints were apparent in the UK where one head teacher said that if she had to choose between buying books and improving the school toilets her governors would expect her to buy more books.

Childrens' individual responses

In each country these fell into the same three distinct categories:

- 1 Dirty toilets.
- 2 Inadequate privacy.
- 3 Evidence of intimidation and bullying.

1. Dirty toilets (see Table 6)

In both countries all the school toilets were usually cleaned once daily. The head teachers in Sweden said this was the case providing the cleaners came.

2. Inadequate privacy

Privacy was a major issue for the majority of these children (Table 7). Some children commented that the locks were so antiquated that they were frightened, if they used them, they might remain 'locked in the school toilets'. In both centres children made similar comments, such as 'people push the door, anybody can listen while you use the toilet'.

Table 6. Dirty toilets

Children said the toilets were dirty, stank and were unpleasant (there was no significant difference between sexes in either country)	
England	83%
Sweden	77%
In both countries	Pupils suggested that teachers would be intolerant of the school toilets if they had to use them.

Table 7. Inadequate privacy

Inadequate privacy	
Newcastle	52% of girls and 71% of boys. Both sexes had separate toilet blocks. In the boys toilets urinals predominated, with a few individual boys' toilets in each block.
Sweden	None of the schools in Newcastle had locks on all the toilet doors. There were not separate toilet blocks for boys and girls. 41% of girls and 39% of the boys These toilets had locks on but could be opened easily from the outside when using a coin.

Table 8. Bullying and intimidation

Are you aware of any bullying in your school toilets?	
Newcastle	40% of all children in Newcastle answered 'yes'
Sweden	47% of the children said they did not know that bullying existed in the school toilets and only 3% answered that they knew bullying happened there

3. Bullying and intimidation. (see Table 8)

Children in both centres commented they were afraid to use the school toilets. In both centres they described bullying graphically in the open ended question, making similar comments, '*Pushing, shoving, physical abuse and trying to kick the toilet door open while on the toilet.*' (A translated quote from a Swedish child) The Swedish children commented that they might '*be baptised*' (translation) while in the loo. This appears to mean the same as the Newcastle children's comments of '*they shove your head in the toilet bowl*'.

Children's reported toilet use

A significant number of children reported that they avoided defecating in the school toilets, however few children avoided urinating in school toilets (see Table 9).

Children's suggestions

Children in both centres answered an open-ended question on improvements, which could be made to their school toilets (see Table 10).

Table 9. Avoidance of school toilets

Do you use the school toilets when you need to 'poo'?	
Newcastle	62% of boys and 35% of girls
Sweden	28% boys and girls

The researchers' perceptions

Hot and cold water for hand washing was available in all 10 Newcastle schools. Some individual sinks had cold water only and some taps were broken and there were some broken flushing systems. Twenty-one per cent of toilets were not flushed in the morning, 69% of were unflushed later in the day, with an associated increase in bad smell and dirty toilet seats.

In the Swedish schools the researchers commented that seven out of eight school toilets smelt of urine, six schools toilets were not adequately clean. In four schools the toilet locks could easily be opened with a coin, six had no soap, two no towels, one flushing system broken, one toilet had water and urine all over the floor, and there were no lights outside two groups of toilets.

Table 10. Improvement suggestions

England	63% of the Newcastle pupils made suggestions for improvements. 1/3 related to the need for greater privacy. Boys writing that they wanted more individual toilets
Sweden	In Sweden 44% of all children made suggestion for improvements. They wanted separate toilets for boys and girls.
Both England and Sweden	Children wrote that toilets should be secure with locking doors, redecorated, cleaned more often, rebuilt and that toilet paper and soap should always be available

Table 11. Differences between English and Swedish schools

England	1. In Newcastle children start school aged four 2. Head teachers are responsible to a governing body and the local education authority 3. In UK schools there are separate boys and girls toilets
Sweden	1. In Sweden children start school at 6 or 7 years 2. The head teacher is solely responsible for school management 3. Many of the schools have mixed sex toilets (which the children dislike)

Discussion

In this study, a questionnaire was used in the classroom setting supervised by researchers with 100% participation of children.

Limitations of study

This pilot study was only carried out in two European cities, it was difficult to develop questions clearly understood by children of differing intellectual ability and differing backgrounds. Some of the original questions were difficult for children to interpret, and these questions were excluded from our results.

Results

Startlingly similar results were found in both study populations. Although there are significant differences in each country (see Table 11)

In the UK boys' toilet blocks generally consist of urinals and a few toilet stalls, and the boys wanted more single toilet stalls. However, one of the Newcastle schools was different. This school had been rebuilt and planned with parents, staff and pupils, which had resulted in school toilets being built adjacent to the classroom. Not only were they cleaner but were easily accessible.

In both centres children talked negatively and graphically about school toilets (see *Appendix*) and

many children avoid using them. At the beginning of the last decade previous studies described the dirty state of school toilets (Jewkes & O'Connor 1990; Joseph *et al.* 1990; Rajaratnam *et al.* 1992) In spite of their clear recommendations there has been no apparent improvement or new legislation drafted.

Physical implications of poor school toilets

It has been stated that the best position to be able to relax the pelvic floor muscles in order to empty the bladder properly is to sit with support for the thighs and feet, bent slightly forward (Wennergren *et al.* 1989) Despite that, in a previous study of female micturition habits (Moore *et al.* 1991), it was reported that 85% of women generally crouched when using public toilets, resulting in an 149% increase of residual urine volume. In schools with dirty toilet seats there is a risk that children using them crouch, potentially increasing their residual urine volume and increasing the risk of inadequate voiding and UTI.

Poor Hygiene

Inadequate hand washing materials meant these children were not encouraged to wash their hands. Previous research stated that up to 50% of people do not wash their hands after using the toilet (Guinan *et al.* 1997). Although the majority of

these school toilets were cleaned once daily, they became dirtier as the day progressed. Added cleaning midday would improve this situation, as would supervision of the school toilets.

Bullying

Inadequate privacy combined with bullying resulted in many children avoiding school toilets. Bullying has been recognized as a problem in primary school children (Williams *et al.* 1996) and as a risk for children developing depression (Kaltiala-Heino *et al.* 1999). Children in our study stated that bullying occurred in school toilets. Boys reported this more than girls in Newcastle, which may be explained by the predominance of urinals and the resultant lack of privacy in boys' toilets. Interestingly the Swedish children appeared reluctant to talk about the possibility of bullying. Other reasons can be speculated on - perhaps they never use the toilets or they are afraid using them because of the risk of bullying.

Avoidance of defecation while at school

We are concerned that, in both countries, that a significant number of children deliberately avoided using the toilet to 'poo' at school. More Newcastle boys than girls said that they avoided 'pooing at school', which may be a result of the limited number of single toilets in boys blocks, where urinals predominated.

Conclusion

The researchers' observations on one single occasion compared to the pupils' daily experience confirmed that these toilets were below normally tolerable standards. Children's recommendations reflected their desire for toilets of a higher standard. Going to the toilet is more than just a physical reflex. The whole ambience must be comfortable for adequate elimination, and this was not the case in the majority of these toilets.

Discussions with other European colleagues suggests that school toilets are also a problem for many other European children. Current legislation is limited in both the UK and Sweden to numbers of

toilets per pupil, this needs extending to include acceptable standards of hygiene (availability of soap, towels, washing facilities, toilet paper) and adequate privacy. Specific funding needs to be identified to ensure the minimum standard of toilets children deserve.

Basic improvement in toilet standards would be cost effective, preventing future consequential urinary and bowel problems and outbreaks of infectious diseases.

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Appendix

The School Toilets

they smell!
 they have broken seats
 the colour is awful
 people block the taps, like dams
 kids say let's hang out in the loos
 soap smeared on the mirrors
 people don't flush the toilet, yuck!!
 people peeping over the toilet doors
 paint being pulled off
 and even blots of wet tissue on the ceiling
 danger beware boys toilets! (Smelly)
 slamming doors on people's fingers . . .
 Ouch!!
 Samantha (aged 10)