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How school-built factors and organisational dimensions contribute to bodily exposure, degrading treatment and bullying in school changing rooms

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ABSTRACT

This paper explores how school-built factors and organisational dimensions contribute to bodily exposure, degrading treatment and bullying in school changing rooms. The findings in this study stem from an ethnographic research project exploring the relations between school bullying and the institutional context of schooling. The project focuses on the perspectives of teachers and pupils from pre-school class up to grade eight (i.e. approx. ages 5–15). In this particular study, we focus on participant observations and semi-structured interviews conducted at three elementary schools and one lower secondary school in Sweden.

Analysis of the data was guided by constructivist grounded theory (Charmaz, 2014) [*Constructing grounded theory* (2nd ed.). Sage].

Findings reveal how the changing room was a vulnerable and unsafe space associated with an ever-present fear of experiencing bodily exposure, degrading treatment, and bullying. Our findings illuminate how social-ecological elements such as the physical design of the space and organisational factors such as staffing and scheduling can both increase and decrease the risk of experiencing bodily exposure, degrading treatment, and bullying in the changing room. This demonstrates that much more consideration needs to be given to how social interactions and experiences within school changing rooms are influenced by school-built factors and the ways in which they are organised within the different social-ecological systems beyond the microsystem setting.

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Introduction

School changing rooms have been identified as bullying hot-spots (Vaillancourt et al., 2010) and have recently been reported to be among the least safe spaces in Swedish schools (Friends, 2021). Similar associations between changing rooms and lack of safety have been found in studies from the US (Couturier et al., 2005; Fisette, 2011; Izadi & Hart, 2023), Canada (Atkinson & Kehler, 2012), Spain (Devís-Devís et al., 2018), Australia (Storr et al., 2022), the UK (Harris et al., 2022; Lamb et al., 2016; Niven et al., 2014; Quarmby et al., 2019), Ireland (Neary & McBride, 2021) and the Nordic countries (Berg & Kokkonen, 2022; Frydendal & Thing, 2020; Kjaran, 2019). In changing rooms, bodies are on display and this can lead to a sense of bodily exposure (Atkinson &

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Kehler, 2012; Devis-Devis et al., 2018; Fisette, 2011; Frydendal & Thing, 2020; Quarmby et al., 2019). While changing rooms may be perceived as unsafe regardless of gender and sexuality (Herrick & Duncan, 2023), changing rooms are nonetheless gendered spaces that uphold and reinforce gendered norms that distinguish between bodies (Atkinson & Kehler, 2012; Fisette, 2011) and cause discomfort for those not aligned with such norms (Berg & Kokkonen, 2022; Devis-Devis et al., 2018; Herrick & Duncan, 2023; Kjaran, 2019; Quarmby et al., 2019). Due to experiences of bullying and discomfort in changing rooms, some pupils may adapt their use of those spaces by altering where they get changed (Berg & Kokkonen, 2022; Fisette, 2011; Harris et al., 2022; Lamb et al., 2016), becoming less active during physical education (PE) lessons to minimise the need for showering (Niven et al., 2014; Jiménez-Barbero et al., 2020; Quarmby et al., 2019; Storr et al., 2022), or skipping showering altogether (Atkinson & Kehler, 2012).

Some studies have emphasised the role of spatiality in identifying unsafe hot-spots such as changing rooms (Borg, 2023; Lamb et al., 2016). Spatial aspects linked to perceived lack of safety in changing rooms include the uncovered and public nature of the setting (Fisette, 2011; Mordal Moen et al., 2018), the unstructured nature of the space and the activities therein (Mordal Moen et al., 2018), and the lack of adult supervision (Atkinson & Kehler, 2012; Mordal Moen et al., 2018). These spatial aspects connect to the spatial design of changing areas that are often spatially open and do not provide anywhere to store clothes properly (Atkinson & Kehler, 2012; Kjaran, 2019; Lamb et al., 2016; Niven et al., 2014) and to organisational dimensions related to time pressure, scheduling, and lack of adult presence (Atkinson & Kehler, 2012; Borg, 2023; Couturier et al., 2005; Izadi & Hart, 2023; Mordal Moen et al., 2018). While spatial design (Berg & Kokkonen, 2022; Frydendal & Thing, 2020; Neary & McBride, 2021; Niven et al., 2014) and organisational factors (Borg, 2023; Izadi & Hart, 2023) might affect pupils' experiences of changing rooms, few studies have explored the importance of such factors for understanding school bullying and associated processes in those spaces (Horton et al., 2020; Francis et al., 2022; Izadi & Hart, 2023).

In Sweden, bullying refers to repeated acts of degrading treatment or harassment where the subjected person is at a power disadvantage in relation to the one(s) targeting them (Swedish National Agency for Education, 2022). Degrading treatment includes any act that violates a pupil's dignity (e.g. name-calling, physical violence or negative rumour-spreading), while harassment refers to degrading treatment connected to discriminatory grounds (e.g. gender, ethnicity, sexual orientation) (Swedish Education Act, 2010, p. 800). Both are legislated against, and schools are obligated to deal with both one-off and repeated acts of degrading treatment and harassment (Swedish National Agency for Education, 2022). It is therefore crucial to pay attention to one-off incidents, as they may develop into bullying situations. The aim of this study is to explore how changing room experiences of bodily exposure, degrading treatment and bullying are influenced by spatial and organisational factors.

A social-ecological perspective

We take a social-ecological perspective and approach school bullying as a social phenomenon that emerges from an interplay of social-ecological systems (Espelage et al., 2014; Izadi & Hart, 2023; Swearer & Hymel, 2015). A social-ecological perspective allows exploration of how spatial design, organisational factors, and external factors (such as dominant gendered norms) influence bullying practices in changing rooms (Horton et al., 2020). In exploring the influence of these factors, we investigate how bullying and associated processes in changing rooms are influenced by, and influence, four interconnected ecological systems (micro, meso, exo and macrosystem) (Bronfenbrenner, 1977).

The microsystem is the immediate interactional context, encompassing 'the complex of relations between the developing person and environment in an immediate setting containing that person (e.g. home, school, workplace, etc.)' (Bronfenbrenner, 1977, p. 514). In this study we focus on the relations between pupils and the social and physical environment within

school settings. The mesosystem, in turn, refers to the interactions between two or more different microsystems (Bronfenbrenner, 1979), such as the interactions between a pupil's various teachers, to which the pupil is not privy. The exosystem also refers to the interactions between microsystems, but includes those where pupils have no direct relation with one or more of them, such as decisions made by school leaders or in school staff meetings involving staff with no direct relation to those pupils (Bronfenbrenner, 1979). Finally, the macrosystem affects all the other systems and refers to the societal and cultural context, including cultural/societal values, customs and norms, such as those related to the body, age, gender, and sexuality, as well as legal frameworks and regulations, such as those pertaining to school architectural design (Bronfenbrenner, 1979).

Bronfenbrenner (1979, p. 22) pointed to the 'particular physical and material characteristics' of the microsystem setting and argued that it is not enough to focus on the behaviour of individuals. Rather, he argued that it is important to 'investigate the person *and* the environment, with special attention to the interaction between the two' (Bronfenbrenner, 1979, p. 16). In paying attention to the interaction between individuals and their environment, we utilise the work of Lefebvre (1991; see also Frelin & Grannäs, 2014), who referred to three aspects of space: *mental* space, *social* space, and *physical* space. In particular, we are interested in how social practices of bodily exposure, degrading treatment, and bullying in changing rooms are influenced by (mental) understandings of those spaces and their particular (physical) characteristics, and how social experiences of bodily exposure, degrading treatment and bullying in turn contribute to pupils' (mental) understandings of the changing rooms as unsafe spaces.

Methods

The findings in this study stem from an ethnographic research project exploring the relations between school bullying and the institutional context of schooling, which received ethical approval from the Regional Ethical Review Board (2018/284–31). The project was based on fieldwork conducted at three elementary schools and one lower secondary school in Sweden, and included participant observations of pupils' daily activities and semi-structured interviews with teachers and pupils from pre-school class up to grade eight (i.e. approx. ages 5–15). The first and second authors recruited the schools and collected all the data for the study. They introduced the project to the school principals, teachers and pupils, and received informed consent from all participants, including the pupils' legal guardians, before starting the fieldwork. Pseudonyms have been used for the schools, pupils, and teachers to ensure confidentiality.

A purposeful sampling of schools was conducted, which entailed that schools were recruited in different socioeconomic and socio-geographic areas to maximise variation. As the Swedish compulsory school system is divided into four stages – preschool class (ages 5–6), lower elementary (grades 1–3), upper elementary (grades 4–6), and lower secondary (grades 7–9) – we selected schools that covered the four stages. We refer to them as Hillside, Woodland, Clifton, and Redstone. Hillside is a municipal school near a mid-sized city, and had 220 pupils at the time of the fieldwork, divided into seven classes with one class per grade from preschool class up to grade six (i.e. ages 5–13). Woodland is a municipal school located in a mid-sized city district, which had 350 pupils in 16 classes from preschool class up to grade six, as well as a preschool. Clifton is a private school on the outskirts of a mid-sized city, and had 150 pupils in five mixed-age classes from preschool class up to grade six and a preschool. Redstone is a lower secondary municipal school in a mid-sized city district, which had 320 pupils in 12 classes from grade seven to grade nine (i.e. ages 13–15).

To represent all stages of the compulsory education system, we selected classes from preschool class, second grade, fifth grade, and eighth grade. The selection of classes within the schools was based on a convenient sampling procedure and access was negotiated with principals and class teachers. The first author conducted the fieldwork at Hillside and Redstone, and the second author

conducted the fieldwork at Woodland and Clifton. The third author was involved in the analysis phase. Altogether, we spent approximately 8–10 weeks at each elementary school, including 2–3 weeks with one preschool class, one second grade class, and one fifth grade class. At the lower secondary school, the first author spent three weeks with one eighth grade class. In total, we conducted roughly eight months of fieldwork.

We began the fieldwork at each school by interviewing the pupil health and school safety teams. We used these interviews as a starting point for better understanding the school contexts, for example in terms of perceived problem areas, and to inform the participant observations. During the fieldwork, we interacted with pupils and teachers, but focused our participant observations on the daily activities of the pupils and their interactions with their social, spatial, material, and organisational environments. The participant observations followed a funnel-like structure, beginning with more general observations before zooming in on particular aspects of interest and then iteratively repeating this process (Agar, 1996). Our degree of participation in the activities of pupils varied according to the situation and was guided by our concern to ensure the integrity of the participants. For instance, we chose not to conduct participant observations in the changing rooms while the pupils were changing. Rather, we only accompanied the pupils into the changing rooms on three occasions when we were asked to do so, but only at the preschool class and second grade levels. When doing so, we followed the gendered order of the changing rooms, with a female researcher accompanying the girls and a male researcher accompanying the boys. However, at all schools we visited the changing rooms to ascertain how many there were and to examine their spatial design. We jotted our observations down in field notebooks before typing them up in the form of fieldnotes (Emerson et al., 2011).

We conducted the interviews with pupils and teachers towards the end of the fieldwork. These were informed by the ongoing participant observations and were used to explore the perspectives of pupils and teachers in more detail. We asked all the pupils in the participating classes and their teachers to participate, and conducted 13 interviews with 26 teachers and 35 interviews with 139 pupils. While most of the interviews were group interviews, some of the interviews were conducted in pairs or individually depending on availability. The interviews were conducted in assigned rooms at the schools to ensure confidentiality and ranged from 20 min to 2 h in duration. The interviews were audio-recorded and then transcribed.

Data collection and analysis were not distinct phases of the fieldwork but rather informed our ongoing observations and interviews (Hammersley & Atkinson, 2019). The study was theoretically informed (Thornberg, 2012; Wilson & Chaddha, 2009) and the data analysis was guided by constructivist grounded theory (CGT) (Charmaz, 2014). In CGT, researchers are viewed as co-constructors of the data (Charmaz, 2014) and early and ongoing literature reviews are seen as necessary for adopting a theoretical agnostic stance in order to increase sensitivity (Thornberg, 2012). We adopted a social-ecological perspective and used Bronfenbrenner's (1979) concepts as sensitising concepts (Blumer, 1969) to spark our thinking and provide tentative ideas for our data collection and analysis (Charmaz, 2014). As Charmaz (2014, p. 31) puts it: 'Guiding interests, sensitizing concepts, and disciplinary perspectives often provide us with such points of departure for developing rather than limiting, our ideas' (Charmaz, 2014, p. 31).

Accordingly, we took an open approach, whereby we engaged in theoretically-informed initial, focused, and theoretical coding and utilised those sensitising concepts that best fit analytically with our understanding of the participants' main concerns (Forsberg, 2022; Charmaz, 2014). During initial coding, for example, we identified changing rooms as potential spaces for bodily exposure, degrading treatment and bullying, and thus directed our focused coding on how spatial experiences of the changing rooms connected to other aspects such as school design, scheduling, and teacher presence. During the theoretical coding, we utilised the social-ecological perspective, and Lefebvre's (1991) theoretical work on space also earned its way into the analysis in terms of fit and relevance.

Findings

Our findings demonstrate how changing rooms were perceived by both teachers and pupils to be hostile spaces where pupils' bodies and belongings (e.g. clothing, bags and shoes) were exposed. This exposure was associated with experiences and fear of degrading treatment and bullying, especially that which was directed towards aspects of the body. Our findings also illuminate how such experiences and fear were linked to the changing rooms' spatial designs and organisational factors such as staffing and scheduling, and how different social-ecological elements could both increase and decrease the risk of experiencing bodily exposure, degrading treatment and bullying. We present our findings in three sections. The first section, *Spatiality*, attends to how the changing rooms were used and perceived, and became associated with bodily exposure, degrading treatment, and bullying. The later sections, *Spatial design* and *Organisational factors*, show how these spatial experiences were also connected to the design of the space and organisational factors such as staffing and scheduling.

Spatiality

The spatiality of the changing rooms varied at the four schools. At Hillside and Woodland, the PE halls and changing rooms were housed in separate buildings. At Clifton and Redstone, they were located in the main school building. While the changing rooms at Hillside and Clifton opened directly onto the PE halls, the changing rooms at Woodland were connected to the PE hall by a short corridor. At Redstone, in contrast, the changing rooms were located in the basement, some distance from the PE hall. While Hillside, Clifton, and Woodland had two changing rooms each (one for boys and one for girls), Redstone had six, including two for boys, two for girls, and two extra changing rooms to allow pupils to separate into smaller self-selected groups.

At all of the schools, the changing rooms were spaces where pupils and teachers were concerned about bodily exposure, degrading treatment, and bullying. For instance, Jonas, a teacher at Hillside, pointed to the issues of degrading treatment and bullying when he stated after a PE lesson that, 'today there was a lot of unnecessary commenting towards a boy in the changing room about his shoes, that he could not tie them.' Ellen and Emilia, two fourth-grade girls at Clifton, described how degrading treatment and bullying could take shape in the changing room and how it could be linked to bodily exposure and the violation of property:

- Ellen: It's like you say things, for example, in the changing rooms that someone has, like, 'Yes you are very thin' and so on. [...]
- Emilia: Yes, like you might say a lot of mean things, you might hit the person, or you take their stuff and just, 'Catch it if you can' and then perhaps there are more people passing the stuff between them so you can't get your stuff.
- Ellen: And then you're in first grade and ... well, maybe fifth graders bully a first grader and take their backpack and just throw it over them and so on.
- Emilia: Yes, it's something they could do.

Ellen and Emilia's elaboration illustrates a 'judging gaze' (cf., Fiset, 2011; Mordal Moen et al., 2018), whereby some pupils' bodies were exposed and constructed as deviant or wrong through the use of degrading comments ('Yes you are very thin'). It also points to the unequal power relations involved in bullying situations, whereby those targeted were outnumbered or younger than those engaging in the degrading treatment.

Even though we only accompanied the pupils to the changing rooms on three occasions during the fieldwork, similar incidents were encountered. At Hillside, for example, a group of second grade girls were talking about the underwear they were wearing when one of the girls commented on another girl's underwear:

- In the changing room with the girls from second grade. They are changing clothes to get ready for the PE lesson. In the midst of changing clothes, they start to talk about their underwear. Especially three of the girls are

engaged in this talk. Mia says, 'oh your panties are really nice' to Sarah. Mia then says to Mandy, 'yours look really big.' Mandy gets upset and says, 'no they're not', and Mia replies, 'oh no, yeah, they're not big' (Fieldnotes, Hillside School, January 31st).

This type of judgmental commenting reveals how pupils' bodies were exposed in various ways in the changing room and thus open to the judging gaze of others. Mandy's reaction to having her panties described as 'really big' alludes to the risks of receiving negative comments related to the body in the changing room, as big panties also suggest a big body, which may be deemed undesirable because of dominant macrosystem-level gendered norms connected to slim body ideals (Forsberg, 2017; Thornberg, 2018).

Bodies were also commented on in relation to the issue of not showering, revealing how the changing room space became closely tied to a certain kind of spatial activity. The following fieldnote from Hillside, for example, highlights how the changing room became a space where some pupils discussed who did not shower and in doing so positioned their bodies as unclean and thus different from the norm:

In the changing room after PE. Mia asks one of the girls if she has taken a shower. The girl does not reply. When leaving the changing room together with Mia and Allie, they talk about the girl. Mia says that she has noticed that the girl usually does not shower because she finds the showers to be gross. Allie says that the girl says she is going to shower at home but never does (Fieldnotes, Hillside School, February 15th).

Mia and Allie's comments about the girl not showering highlight that what happens in changing rooms may also follow pupils out of the changing rooms and become the subject of rumours and gossiping. Highlighting how changing room norms may vary from context to context, however, Nils, the PE teacher at Redstone, suggested that not showering was the norm amongst pupils at that school, despite them having access to shower cubicles and six different changing rooms. As he put it, 'Most of them do not shower afterwards because they say they are not sweaty, and we cannot force them to shower. But perhaps it is not so good that they skip it.'

The spatial elements highlighted in this section draw attention to the importance of microsystem factors such as how changing rooms are understood (i.e. as mental spaces) and used during interactions (i.e. as social spaces). However, as we will demonstrate in the following section, it is also necessary to understand how pupil interactions in, and experiences of, changing rooms relate to their spatial design (i.e. as physical spaces) (Lefebvre, 1991).

Spatial design

The spatial design of the changing rooms impacted pupils' experiences of those spaces, and influenced the extent to which they experienced bodily exposure, degrading treatment, and bullying. From a social-ecological perspective, the influence of spatial design highlights how social interactions in changing rooms may be shaped by macro- and exosystem factors related to architectural ideas and the design of those spaces. There were no lockers available in any of the changing rooms at the four schools, which meant that pupils could not put their belongings away but rather had to hang them on hooks on the walls. This made it possible for other pupils to target their belongings and to incorporate them into social interactions in negative ways. Viola, a second-grade girl at Clifton, provided an example of this:

In this school, I haven't been bullied, but a pretty bad thing has happened. It was a girl, who – it was that one of them who left this school – who did it to me. She put a piece of soil in my pants during PE and then she shouted to the whole changing room that it was poop when I got it out.

While Viola stated that she had not been bullied, there is no doubt that the situation was degrading for her, as she was positioned as someone who 'pooped' and thus could not control her own body, and that it occurred in an imbalanced power situation involving 'the whole changing room'. This example illustrates how the violation of property may also lead to the violation of bodily dignity.

At all four schools, the changing rooms had an open design that meant the pupils got changed in front of each other. The open design also meant that pupils risked exposure whenever the door to the changing room was opened, particularly if they were on one side of the room. For example, a group of fifth grade girls at Woodland described how they tried to avoid bodily exposure by positioning themselves on one side of the changing room in case someone opened the door. As Hailey explained:

- Hailey: That's why we, everyone in the class is on the right side of the changing room so that, if you sit on, if you get changed on the left side, you're screwed.
 A2: Yeah ok, because then you can see?
 Hailey: Yeah, straight in.

In this example, Hailey explained how the girls sought to reduce the risk of exposure by keeping to the right of the changing room, as being on the left meant that they would be exposed to anyone opening the door and looking 'straight in'.

The risk of bodily exposure was also influenced by the design of the showers and the extent to which they were open to the judging gaze of others. This was exemplified by a group of second grade girls at Hillside, where the showers were openly visible from the changing area, who pointed to how the construction of shower cubicles might create an increased sense of safety in the changing room:

- Bessie: I think it's scary in the changing room.
 Jenny: The shower is like, you might want something that covers you up, so no one can see because we don't want anyone else to see.
 Jennie: I wish we had shower cubicles, but we don't.
 Laura: We can raise it at the pupil council meeting and write it up as a question.

These girls pointed to the importance of spatial design and discussed how they wanted the changing room space to be redesigned with shower cubicles so as to provide cover that would prevent them from being seen.

Reasons for why pupils would not want to be seen were raised by teachers and pupils who stated that pupils sometimes received negative comments about their bodies and that some of the comments were related to gendered norms about the body connected to bodily development, muscles, puberty, and menstruation (Ames & Yon, 2022; Benschaul-Tolonen et al., 2020; Duncan, 1999). At Redstone, for example, where the changing rooms had been redesigned to incorporate shower cubicles, one of the teachers, Matti, discussed bodily comparison and gendered norms by drawing on the experiences of his ten-year-old son:

I have a ten-year-old at home and he is sad after PE because they compare each other at the age of ten. I think it's terrible. 'You look like that, and you have such a small one' so it's when you're at this age, so, so it's hard and then when you enter puberty and some girls maybe don't have breasts but some have and the boys certainly compare themselves with muscles and sizes and it is clear that it becomes unsafe in such environments. And many may choose not to shower then.

Matti pointed to the ways in which pupils are subjected to the judging gaze of their peers, even at a young age, and how bodily differences become more readily apparent during puberty and can lead to distinctions being made between 'normal' development and perceived bodily deviation. In doing so, he also highlighted the role of spatial design and organisational factors by noting that such comparison 'becomes unsafe in such environments'.

In a similar way, a group of fifth-grade girls at Woodland talked about the negative gaze of peers and how attempts to avoid it might also lead to degrading treatment and bullying related to pubertal changes such as menstruation:

- Hailey: I think it's mostly that people don't want to get looked at when they get changed and stuff. Most people probably don't want to get looked at.

- Sally: Yeah, because when I was in the third grade, there were some girls, who were popular then, who have left now, they used to give me looks when they looked at my body and I didn't understand anything. They used to think I was disgusting, but yeah, I didn't understand why.
- Tyra: But there can also be a bit of a risk of bullying, if you go into the toilet to go to the toilet or get changed because, or among the girls because then-, because we are in the fifth grade, then rumours can be spread about us having our periods and stuff.
- Hailey: Because in our class, the girls in the class are pretty close to each other anyway, so we talk about everything in the changing rooms. But it's just that fact that some don't want to get changed in front of their classmates.

The girls pointed to how the judging gaze of peers was associated with degrading treatment where bodies were evaluated as 'disgusting' and how attempts to avoid it by getting changed in the toilet could backfire and lead to indirect forms of bullying, such as the spreading of rumours about menstruation. The girls thus highlighted a catch-22 situation where they were either directly exposed to the judging gaze and comments of peers or subjected to indirect rumour spreading about why they did not get changed in front of their peers. In doing so, they illustrated how the spatial design of the changing room, with its unlocked doors and open changing area, was implicated in creating a forced and unwanted bodily exposure that increased pupils' sense of insecurity due to the judging gaze and comments of peers.

Organisational factors

At both Woodland and Hillside, the safety teams had tried to improve the situation in the changing rooms by scheduling staff to be present. As Anja, at Hillside, explained:

We have often had to place staff, if we can, in the changing rooms because it is a place that we have noticed in surveys that bullying happens a lot. And you are a bit exposed when you must undress and shower and clothes can be commented on.

As Anja stated, school staff were aware that pupils could feel exposed when getting undressed and showering and had made efforts to arrange for staff to be present in the changing rooms when possible. In a similar way, members of the safety team at Woodland talked about how they had tried to schedule staff to be in or around the changing rooms but that this tended to be forgotten at the organisational exosystem level. As Ingrid stated:

It's somehow forgotten all the time. When we're going to set the schedule for this year, we reminded them to 'remember that we need playground monitors out there, but it also has to be staffed in the changing rooms'. We only have one PE teacher and it's a lot to ask of him to supervise all the changing rooms, because he has a very full schedule anyway, so we have to help him with that. But it wasn't done, and it still happens that there are pupils in or outside the changing room without anyone being there, even though it is such a vulnerable place. So, it will probably come up again in this year's evaluation.

The shortage of staff in and around the changing rooms can be understood in terms of macro-, exo- and mesosystem factors related to educational funding, staffing, and the scheduling of those who are available. While we observed several examples where teachers were present to unlock the doors to the changing rooms, and sometimes even follow the pupils into the changing rooms, there was often only one teacher present, who was only able to follow one group of pupils into one of the changing rooms. For example, the PE teacher at Woodland complained that he was often left to cope with situations related to the changing rooms on his own because of 'the very compressed' schedule and subsequent lack of staff available.

While teachers highlighted the importance of having staff present in and around the changing rooms, pupils instead pointed to issues of spatial design and scheduling. According to them, organisational factors, especially issues of scheduling, contributed to bodily exposure and the risk of degrading treatment and bullying because of other classes entering the changing room early. For example, a group of fifth grade girls at Woodland described how pupils from other grades

showed up too early and ran into the unlocked changing room while they were still getting changed. As Bianca elaborated:

Every time we've finished the PE class and the fourth graders start about a quarter of an hour after us, roughly. And yesterday we had PE and then they came, and they came 13 min before they started, when we had finished. We were, or we hadn't stopped but we had started to put our clothes on, to get changed. Yeah, and they came in when there were 13 min left and then, and we have a code into the building, although they, some know the code and some knock on the door. And if someone leaves the building, then everyone else runs in and then everyone runs into the changing room and gets changed and so on. And then we tell them, 'Wait, you haven't started' and there's a quarter of an hour left until they start.

In this example, Bianca pointed to organisational factors related to scheduling and how these may lead to pupils not only being subjected to the judging gaze and comments of same-aged peers, but also younger peers who are not necessarily at the same stage of bodily development. In the same interview, Stella expressed that these situations made them uncomfortable because, as she put it, 'some bodies have changed on those of us who are older and maybe they haven't changed on those who are younger'. This situation was further elaborated by Zoe during the interview:

I mean, also with the kids who come in there, I mean, they, some, I think many of them have also changed but not as much as our class, because we are a year ahead, and then they come in and are like, 'What the hell has happened to you there? Wow, why do you have hair there?' 'Should you have hair under your arms?' And 'What kind of lump do you have there, like underneath?', and like, 'What's that?' You're just like, 'Get out!' And even some in your own class do it as well. There are some who have experienced others doing it, and just imagine what it's like when someone a year younger does it.

Zoe described how the girls received degrading questions about their pubescent bodies being deformed (i.e. with 'lumps') and disgusting (i.e. with hair growth) and how such comments were made not only by classmates, but also by younger pupils.

Taken together, the girls' comments highlight how macro-, exo- and mesosystem level organisational factors, related to resources, staffing and scheduling, made it possible for younger pupils to show up ahead of time and thus for the girls' bodies to be exposed and subjected to judging gazes and comments related to their changing pubescent bodies and associated gendered norms (Ames & Yon, 2022; Benshaul-Tolonen et al., 2020; Duncan, 1999). This illustrates how the various social-ecological systems can contribute to changing rooms being experienced as negative social spaces associated with unwanted bodily exposure, degrading treatment, and bullying.

Discussion

Teachers and pupils viewed the school changing rooms as vulnerable and unsafe spaces that were associated with the risk of experiencing bodily exposure and being subjected to the judging gazes and comments of peers. Reflecting previous findings, some pupils expressed that they had experienced degrading treatment and bullying in the changing rooms (cf., Atkinson & Kehler, 2012; Devís-Devís et al., 2018; Fisette, 2011; Frydendal & Thing, 2020; Quarmby et al., 2019). While these experiences sometimes involved the violation of the pupils' belongings, they were most commonly related to macrosystem-level norms about gender, sexuality, and the body. The connections between these experiences and macrosystem-level norms have been highlighted in previous studies dealing with girls' fears of being teased and bullied because of menstruation (Ames & Yon, 2022; Benshaul-Tolonen et al., 2020) and boys' concerns with muscles and size (Atkinson & Kehler, 2012). Such degrading experiences cause girls to feel ashamed about their changing bodies and their experiences of puberty and menstruation (Ames & Yon, 2022; Benshaul-Tolonen et al., 2020; Duncan, 1999) and boys to experience anxiety about participating in PE lessons (Atkinson & Kehler, 2012).

Changing rooms are hot-spots for these kinds of experiences due to the exposed nature of the spaces, and in line with other studies, we found that some pupils used avoidance strategies such as positioning themselves on one side of the changing room, skipping showering (cf. Frydendal & Thing, 2020), and getting changed in the toilet (cf. Harris et al., 2022). However, our findings also demonstrate that skipping showering and/or changing in the toilet are potentially risk-laden strategies that may lead to negative rumours being spread about that pupil's body, hygiene, and/or puberty/menstruation issues.

Most importantly, our study reveals how bodily exposure, degrading treatment and bullying are influenced by spatial design and organisational factors. Spatial design elements such as open changing areas (Atkinson & Kehler, 2012; Kjaran, 2019; Lamb et al., 2016; Niven et al., 2014), unlocked doors, lack of shower cubicles, and absence of lockers for safely storing clothes (Kjaran, 2019) affected pupils' experiences of changing rooms as unsafe social spaces (Fram & Dickmann, 2012; Frelin & Grannäs, 2014; Lefebvre, 1991). All of the schools in our study had open changing areas and unlocked doors, and thus the doors could be opened and the pupils could be exposed and subjected to degrading situations. Likewise, at three of the schools, the shower areas were open, and pupils expressed that this increased their sense of exposure and insecurity. Some pupils in our study suggested that they wanted shower cubicles to provide some cover. While the changing rooms at Redstone (the lower secondary school) had been redesigned to incorporate shower cubicles, few pupils showered there. This is perhaps because the changing rooms were otherwise still open, and bodies and belongings could thus still be exposed and targeted. The absence of lockers at all four schools meant that there was nowhere for pupils to safely leave their belongings. This meant that belongings could be taken and/or thrown around or, as exemplified by Viola's experience, used in degrading ways.

Our study also illustrates how organisational factors such as scheduling and staffing contribute to pupil experiences of changing rooms as unsafe social spaces (Borg, 2023; Izadi & Hart, 2023). Issues of scheduling, for example, meant that pupils from other grades were able to enter the changing rooms early and subject pupils to their judging gazes and comments, and pupils emphasised that this made them feel more exposed and insecure. While pupils pointed to a need for changes in the scheduling of different grades' access to the changing rooms, teachers focused more on the issue of teacher presence and expressed that lack of resources meant that they struggled to ensure adequate teacher presence and supervision of the changing rooms.

Our findings suggest an urgent need to consider how school design influences bodily exposure, degrading treatment, and bullying in school changing rooms. Architectural decisions are influenced by (mental) ideas about changing rooms at the macro- and exosystem levels, where pupils are not represented. Likewise, organisational decisions regarding resourcing, staffing, and scheduling are taken at the macro-, exo- and mesosystem levels, where pupils are not involved. However, as we have shown, the physical spatiality of changing rooms, and the ways in which they are designed and organised, directly impact pupils' experiences of them as unsafe mental and social spaces connected to bodily exposure, degrading treatment and bullying. More attention should be paid, therefore, to understanding how negative social interactions and experiences within changing rooms are influenced by school-built factors and the ways in which they are organised. This entails looking beyond the microsystem to also consider the influence of decisions taken at the other social-ecological system-levels.

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