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Places and spaces: exploring interconnections between school environment, resources and social relations

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ABSTRACT

Background: Relational issues at school, including bullying, tend to be interpreted primarily in terms of the behaviour of individual students. Whilst research has broadened this focus, more needs to be understood about how the design and management of the school environment and its resources may influence peer relations.
Purpose: The study sought to consider interconnections between the physical and organisational environment, resources, and social relations in school settings.
Method: Ethnographic research was conducted at three schools in Sweden, consisting of 6 to 8 weeks of participant observations at each school, and interviews with school safety or health teams, 21 teachers, and 121 students from preschool class (ages 6–7) to sixth grade (ages 12–13). Field notes and interview data were analysed using an approach based on constructivist grounded theory.
Findings: In-depth analysis of data identified a complex network of interconnections between the school environment, resources and peer relationships. In particular, it illuminated how competition for limited resources can influence social relations negatively. This may lead to brief minor conflicts, which, in turn, could potentially pre-cipitate or become part of more systematic school bullying situations.
Conclusions: Our findings highlight the significance of decisions about the uses of space in schools, including choices in design (e.g. of play spaces) and the distribution of resources (e.g. equipment). Deeper understanding of the interconnections between the school environment, resources and peer relations can help inform efforts to support student wellbeing.

Introduction

Negative peer relations, school bullying and cyberbullying are widespread problems globally, with studies demonstrating their detrimental effects on the wellbeing of school-aged children (Halliday et al. 2022; Li et al. 2022; Schwartz-Mette et al. 2020). Recent international studies of bullying prevalence have highlighted that large numbers of students are regularly subjected to bullying in schools around the world, but that prevalence rates vary greatly from context to context (Biswas et al. 2020; OECD 2019). While rates of school bullying are comparatively low in Sweden (Health Agency of Sweden

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2018), where this study was conducted, recent research suggests that prevalence rates have been increasing (Bjereld, Augustine, and Thornberg 2020). In line with some international studies (Li et al. 2022; Marciano, Schulz, and Camerini 2020), recent findings from Sweden have identified that traditional forms of school bullying and cyberbullying are often connected and that cyberbullying is less prevalent than traditional school bullying (Health Agency of Sweden 2018).

There have been numerous studies into school bullying that have sought to broaden the focus from the behaviour of individuals to include the social-ecological context within which school bullying occurs (e.g. Hong and Espelage 2012; Horton 2019; Swearer and Espelage 2011). Reflecting the complexity of the context, research findings have pointed to the influence of a range of factors within school settings, such as the perceptions of school staff (e.g. Espelage, Polanin, and Low 2014), teacher–student relationships (e.g. Ten Bokkel et al. 2022), class climate (e.g. Thornberg et al. 2022), classroom climate (e.g. Thornberg, Wänström, and Jungert 2018), school climate (e.g. Aldridge, McChesney, and Afari 2018), school anti-bullying work (e.g. Gaffney, Ttofi, and Farrington 2021), academic competition (e.g. Bibou-Nakou et al. 2012), and seating arrangements (e.g. Horton 2015).

Scholarship has also drawn attention to the relations between school bullying and the locations within which it occurs. There is a suggestion that bullying tends to occur in unstructured spaces where the activities are not pre-determined by adults (Leff et al. 2003); unmonitored spaces where there is a lack of adult supervision (Atlas and Pepler 1998); undefined spaces where it is unclear how the space should be used (Astor, Meyer, and Pitner 2001); and at unstructured times (such as breaks and lunchtimes), where students typically have more control over which activities they choose to pursue (Woolley 2019). However, while researchers have pointed to particular 'hot spots' for bullying within schools, such as playgrounds, hallways, and washrooms (Vaillancourt et al. 2010, 47), more needs to be understood about how the design and management of school spaces may influence the relational issues that occur within them (Francis et al. 2022; Migliaccio, Raskauskas, and Schmidtlein 2017). The study reported in this paper is offered as a contribution to this endeavour. In the section that follows, we seek to contextualise our work and explain more about the setting and conceptual underpinning of our research.

Background

Relationships between physical spaces and social relations in schools

Some researchers have investigated how the physical space of schools can influence social relations in school, either by increasing the potential for incidents to go undetected (Fram and Dickmann 2012), or by limiting the possibilities available to students (Gordon 1996). A number of studies have focused more specifically on the design and management of school playgrounds (Lambert 1999; Malone and Tranter 2003; Mulryan-Kyne 2014). Lambert (1999), for example, considered whether social interactions could be negatively influenced by 'school based triggers' (25) such as playground design and a lack of adequate play equipment. In a similar way, Malone and Tranter (2003) pointed to the significance of the 'carrying capacity' (117) of school playgrounds, arguing that 'conflict over space use and the impact of crowded and "boring" play spaces need

attention and should be viewed as a significant factor when considering interventions to reduce bullying' (120).

Our previous research suggests the relevance of examining the interconnections between the school environment, resources, and student relations in order to gain insight into why and how conflict may arise at school. For example, in one study (Horton, Forsberg, and Thornberg 2020), it was evident that teachers sometimes perceived competition for resources as a source of conflict between students in their schools. Elsewhere, we found that the design and management of school football pitches sometimes negatively affected peer relations within schools, and that lack of space and resources were contributing factors (Forsberg, Horton, and Thornberg 2023). Overall, the research suggests that understanding more about these interconnections and relationships could have a crucial role to play in efforts to support student wellbeing at school.

The Swedish context

In Sweden, school bullying is commonly understood in relation to other forms of undesirable behaviour, such as degrading treatment (e.g. name calling) and harassment (i.e. degrading behaviour connected with discrimination), with the term *bullying* used when such behaviour occurs repeatedly and where the subjected person is at a power disadvantage in relation to the one(s) targeting them (Thornberg, Bjereld, and Sjögren 2022). Degrading treatment and harassment are legislated against in the Education Act (Swedish Education Act 2010, 800) and Discrimination Act (Swedish Discrimination Act 2008:567), respectively, although the term bullying is not used. School staff are expected to deal with, and report, every individual act of degrading treatment and harassment, and, so, prevent such acts being repeated and thus taking the form of bullying (Carlbaum 2020; Horton, Forsberg, and Thornberg 2022, 2023). Therefore, in addition to focusing on incidents of school bullying, it is also crucial to pay close attention to other relational issues in schools, such as minor conflicts, as these may potentially develop into school bullying situations.

Theoretical framework

In our research, we approached school bullying not only as something that occurs between individuals during their interactions in particular settings but also as something that is influenced by, and influences, the various ecological systems within which it occurs. These systems are the micro-, meso-, exo-, and macrosystem (Bronfenbrenner 1977, 1979). As Bronfenbrenner (1977, 514) explained, 'A microsystem is the complex of relations between the developing person and environment in an immediate setting containing that person (e.g. home, school, workplace, etc.)'. The mesosystem is an extension of the microsystem and includes the relations between the individual's various microsystems (e.g. home and school). The exosystem is an extension of the mesosystem and includes the relations between various microsystems, including those where the individual is not involved (e.g. school and school board). The macrosystem includes societal-level factors such as legal frameworks, cultural traditions, and dominant societal norms which influence the other systems (Bronfenbrenner 1979).

As we wanted to investigate the issue of resource availability within the school environment, we focus specifically on the microsystem of the school. However, in doing so, we were acutely aware of how the other systems influence the provision of resources. This may be in terms of, for example, decisions taken by teachers in order to manage the resources available (mesosystem), school-level decisions regarding resource allocation (exosystem), and societal norms including those related to a sense of 'normalcy' and gender, and also schooling, school and class sizes, school design, and economic priorities (macrosystem).

Within this conceptualisation, we were particularly interested in exploring the relations between individuals and the school environment. In a critique of dominant psychological approaches to behaviour, Bronfenbrenner (1979) argued that 'behaviour evolves as a function of the interplay between person and environment' and that it is therefore necessary 'to investigate the person *and* the environment, with special attention to the interaction between the two' (16, emphasis in original). Accordingly, as well as focusing on the social environment in terms of the interactions between individuals or groups of individuals, we turned our attention to the physical and organisational environment with which individuals and groups of individuals interact. How schools are designed and managed has a performative effect on social processes and relations in school, which, in turn, gives the physical space meaning in everyday school life (Frelin and Grannäs 2014). Thus, through our work, we sought to better understand how *social* elements such as minor conflicts between students are influenced by *structural* elements such as rules and scheduling, and *environmental* elements such as carrying capacity and resource scarcity (Zumbrunn et al. 2013).

Purpose

In this study, we aimed to consider the interconnections between the physical and organisational school environment, resources, and social relations between students by undertaking ethnographic fieldwork in the context of three school settings.

Method

Ethnographic research was conducted at three comprehensive[1] schools in Sweden, referred to here as School A, School B and School C. School A was a municipal school located in an administrative district of a medium-sized city. At the time of the fieldwork, the school had over 300 students from preschool class (i.e. ages 6–7) to grade six (i.e. ages 12–13). School B was a municipal school located in a smaller town not far from another medium-sized city, which had over 200 students from preschool class to grade six when the fieldwork was carried out. School C was a private school located in a residential area on the outskirts of one of the above-mentioned cities. When the research was undertaken, the school had over 100 students from preschool class to grade six.

We spent six to eight weeks at each school, focusing on the daily life of the students. At schools A and B, two to three weeks were spent with one preschool class (i.e. ages 6–7), one second-grade class (i.e. ages 8–9), and one fifth-grade class (i.e. ages 11–12). At School C, which had mixed age groups, two to three weeks were spent with one preschool class (i.e. ages 6–7), one first- to third-grade class (i.e. ages 7–10), and one fourth- to sixth-grade

class (i.e. ages 10–13). The fieldwork at the schools followed what Agar (2006) has termed an IRA (i.e. iterative – recursive – abductive) logic. This entailed finding aspects of interest through observations and interviews, developing working hypotheses based on these, judging their suitability through continued data collection, and going back and rethinking or revising the hypotheses originally formulated, based on new data.

Ethical considerations

Prior to conducting the fieldwork, we received approval (2018/284–31) from the regional ethical review board. We introduced the project to the school principals, school staff, and students in the classes and obtained informed consent from all participants, and from legal guardians of the participating students. We explained to participants that taking part was voluntary. They were assured that they could choose not to answer questions, that they could withdraw their consent at any time, and that data would be held confidentially. We conducted the interviews in assigned rooms. For reporting purposes, data have been anonymised as necessary.

Data collection and analysis

Participant observations were a central part of the ethnographic fieldwork. These helped to build rapport with the participants as well as inform the interviews (Agar 1980; Hammersley and Atkinson 2007). Observations were written down in field notebooks, either at the time of occurrence or as soon as they could be afterwards. They took various forms, including jotted and elaborated notes, descriptive notes such as sketches and episodes, reflexive notes, and analytic notes such as short asides and longer commentaries (Emerson, Fretz, and Shaw 1995). The fieldnotes were then typed up electronically at the earliest opportunity, in order to facilitate recall and further analysis.

We sought to gain the perspectives of participants by undertaking semi-structured interviews (Davies 1999; Walford 2008). In advance of carrying out the observations at each school, we conducted interviews with the school's student safety or health team. These preliminary interviews served to inform our observations: for example, in terms of perceived problem areas at the school. After having conducted at least a week of observations, we then conducted interviews with students and teachers from the various classes. In total, we interviewed 21 teachers and 121 students. Most of the student interviews took the form of group interviews with students of the same age (i.e. preschool class, grade 2 or grade 5), although some of the interviews at School C included students of different ages, due to the mixed age classes. Some of the student interviews were conducted in pairs or individually, depending on availability. The teacher interviews were conducted in pairs or groups depending on the number and availability of teachers, although one teacher was interviewed individually at School C. Held in assigned rooms at the schools, these sessions ranged in length from 20 min to 2 hours, with an average of 1 hour per interview. Interviews were conducted in Swedish, audio-recorded and transcribed.

The analysis began at the start of the fieldwork, as analysis is not a distinct stage of ethnographic research (Agar 2006; Hammersley and Atkinson 2007). Rather, our ongoing analysis informed our ethnographic decisions; for example, about where to focus our

observations and what questions to ask in the interviews. In analysing the interview transcripts and fieldnotes, we drew on constructivist grounded theory and engaged in initial, focused, and theoretical coding (Charmaz 2014; Forsberg 2022). Through the initial coding, the concept of *resource scarcity* was generated. This concept was related to various aspects of the data, including the perceived lack of adequate school staff and space for the numbers of students at the schools (see Horton, Forsberg, and Thornberg 2020). The concept of resource scarcity was, thus, used to direct the subsequent focused coding and to consider the various aspects of the concept. During the theoretical coding, we then explored resource scarcity in relation to the social-ecological perspective, which was used as a lens through which to make sense of the data.

Findings

Through the ethnographic approach to data collection and analysis outlined above, we were able to address our study's purpose. It allowed us to identify and consider, in depth, the interconnections between the environment, resources and social relations in the school settings that were the focus of our research. As noted, *resource scarcity* was an issue that emerged in relation to numerous spaces throughout the schools and, accordingly, became a key concept in the analysis. The notion of resource scarcity can be understood in various ways. For instance, we have previously written about it in terms of teachers' perceptions of the lack of time or staff necessary for dealing with and preventing school bullying (Horton, Forsberg, and Thornberg 2020, 2023). We have, too, written about resource scarcity in relation to school football pitches and how that particular space is managed by school staff through scheduling and the establishment of girls-only times (Forsberg, Horton, and Thornberg 2023). While numerous occurrences of this concept were identified in the data analysed in the current study, we focus our presentation of findings on illustrative examples from three school spaces where students spent the majority of their time: the classroom, the playground, and, in the case of one of the schools, a wooded area. These were all spaces where, according to our analysis, access to resources with limited availability appeared to be central to the negative interactions that arose. In the subsections below, we present our findings grouped by these three school spaces (i.e. the classroom, playground and wooded area). Where useful to illuminate key points, anonymised descriptions and quotations from the data, which have been translated from Swedish into English, are included.

School space 1: the classroom

In one of the preschool classes at School A, a popular indoor activity among boys in the class during indoor playtime was playing with plastic building blocks, which were located in one corner of the classroom. The activity was especially popular with a certain group of boys. There were two boys (boy 1 and boy 2) who most regularly initiated constructions using the building blocks, and a third boy (boy 3) often helped boy 1 with his constructions. However, these three boys were not alone in building with the blocks. They were often joined by other boys in the class, including six boys in particular (boys 4–9), who were somewhat more sporadic in their use of the blocks. These construction blocks were a finite resource in the classroom, which meant that the boys sometimes felt the need to

obtain blocks from others, in order to complete their own constructions. This could lead to *skirmishes* breaking out over ownership of the blocks, as highlighted by the following linked illustrative examples involving the boys' construction of a dinosaur and a ship from the building blocks:

Example 1: The green dinosaur

Boy 3 pointed out that the green dinosaur built by boy 2 was missing its tail. Boy 2 reacted by first blaming boy 1 and boy 5, before then deciding that boy 3 had taken green blocks from the dinosaur. Boy 3 denied taking the pieces before then giving boy 2 some green blocks that had been on the floor beside him. Boy 3's decision to give boy 2 some blocks, which may or may not have been part of boy 2's dinosaur to begin with, precipitated a minor skirmish between boy 3 and boy 1, when boy 1 realised there were no more blocks for the ship he had been building together with boy 3. A little later, boy 3 once again gave boy 2 some blocks that had been lying on the floor beside him. As a result, boy 1 became annoyed and confronted boy 3 about why he was helping the other group. Boy 1's irritation led to further skirmishes taking place, including one where boy 1 drove a small vehicle made from blocks over boy 2's dinosaur.

Example 2: Shipbuilding

The scale of boy 1's ship design restricted the amount of building blocks available for the other boys, leading to the taking of blocks that boy 1 perceived necessary for completing the ship. While boy 3 was more open to sharing the blocks with boy 2 when it was clear that he needed them to complete his own construction, boy 1 claimed ownership of the blocks that were not only already connected to the ship but had been set aside for future construction needs. As he put it, 'this is my ship and no one can take anything from it'. During the skirmish, boy 9 suggested that the teacher buy more blocks, and thus pointed to a perceived scarcity of blocks in relation to the number of students using them.

In a later interview, one of the teachers observed that toys such as the construction blocks were limited resources in the classroom:

There aren't as many toys to play with either, so there might not be enough for everyone, if there are many people who want to play with [the building blocks], for example.

In the same interview, this teacher and a colleague explained that the constructions made with the building blocks were demolished at the end of the week, to make sure that there were sufficient blocks available for building 'something new' the following week. While the decision to dismantle the constructions on a weekly basis was taken to manage the resources and ensure that there were blocks available for those who wished to use them, it seemed to have the unintended consequence that children who began building at the start of the week were able to claim some form of ownership over the blocks for the rest of that week. Thus, rather than reducing conflicts over limited resources, attempts to manage what is available through the enactment of a weekly rule may have inadvertently served to fuel the ongoing skirmishes over the use of blocks.

The continued use of the construction blocks for boy 1's shipbuilding culminated in what the boys themselves referred to as 'The [blocks] war' two weeks later. This involved six boys, who engaged in a number of skirmishes whereby they attacked each other's constructions, culminating in the two groups of boys destroying each other's ships. Although there were numerous boys involved in this so-called 'war', it largely centred around the same two boys, boy 1 and boy 2, who had been central to

the earlier skirmishes described above in the 'green dinosaur' and 'shipbuilding' examples. While the boys had somewhat diverging views on what had started the 'war', boy 2 explained that he had become upset because he felt that boy 1 had laid claim to the larger ship:

> I didn't feel so good about it, because in my body it felt like [boy 1] had the ship all to himself and I wasn't allowed to have anything. Because I felt … we agreed that we would have it together, but then it felt like he had it all to himself.

During the interview, boy 2 suggested that the 'war' about the building blocks had been 'cool', and boy 1 said it was 'great fun'. However, when boy 3 asked if they should do it again, both boy 2 and boy 1 said 'no', while boy 4 pointed out that the effects of the building blocks 'war' had been felt out on the playground the next day, where boys 1 and 2 had been 'slight enemies'.

While the above examples do not suggest a bullying situation, they do illustrate how *resource scarcity* can lead to minor conflicts, or *skirmishes*, breaking out over sought-after resources. These skirmishes can involve both physical and verbal acts and can lead to negative emotions and attitudes developing. These then have the potential to extend into other spaces, such as the school playground. Although they occurred within the micro-system setting of the classroom, they were influenced by mesosystem-level decisions taken by teachers about the management of those resources, and exosystem-level decisions regarding class sizes and resource allocation. This illustrates how environmental design elements can impact social elements and how structural attempts at managing the use of limited supplies can inadvertently exacerbate social skirmishes over resources. Given our focus above on the interactions around the construction blocks, it is important to note that other examples were identified through the analysis and could equally have been used for illustration: including, for example, skirmishes over the use of the only sofa in a second-grade classroom.

School space 2: the playground

In the same teacher interview at School A where the construction blocks were discussed, the teachers also stated that the playground (schoolyard) was too small and lacked resources. This was a point made by teachers from other classes, as well. A fifth-grade teacher, for example, commented that 'the playground is far too small for this number of students', and, together with another colleague, suggested that a larger space with more resources would help 'a lot' to reduce the number of conflicts. Teachers explained that the playground was divided in terms of gender. Observations and interviews supported this perception, with boys tending to dominate the half of the playground taken up by the school football pitch, and girls tending to dominate the half taken up by a climbing frame, a sandpit, a swing set containing four swings, and a bouncy seesaw.[2] The tendency from some students to lay claim to limited resources during breaks was raised, amongst others, by two fifth-grade girls, and by a boy in the second grade, who suggested that school would be better if there were more resources for the students to use:

> If the schoolyard was bigger and there were also those slides that are a little higher and more swings and more of those red swings.[3] If there were more then there wouldn't be so many fights: 'no, now it's our turn to do it'.

The positioning of some students as not being perceived as 'worthy' of using the playground resources available was evident in the data. For instance, this notion was raised by a group of second-grade girls at School B, when talking about their experiences of using two swings at the area of the playground where the younger pupils tended to spend their breaks. As girl 1 explained:

> For example, when I was going to swing, [boy] said like this, '[girl 1], you have to eat a bit less, you are so heavy'. He meant that I'm fat. That's what [boy] said.

Girl 2, who was in the same interview, explained that the boy and another boy contested the girls' use of the swings because they wanted the swings for themselves. However, the scarcity of swings also meant that the girls sometimes engaged in similar social skirmishes, with girl 1 suggesting that girl 2 sometimes drew on a similar strategy:

> Yes, because [girl 2] says to [girl], 'You're so heavy, you can't swing very fast'. Then [girl] says, 'Come on then, speed up'. So, [girl] has to speed up like that. That's why we've kind of stopped using the swings now.

While skirmishes over resources such as swings occurred in the microsystem setting of the playground, they were influenced by a range of factors. These include macrosystem-level environmental and structural elements such as the architectural design of the playground and lack of resource provision, and exosystem-level structural elements such as the scheduling of breaks and the management of playground monitoring. Skirmishes were also shaped by micro- and mesosystem-level social elements related to *access negotiation inequality*. In other words, students experienced unequal opportunities to negotiate access to various spaces and resources because the negotiation process was dependent on social hierarchies within and between peer groups.

Illustrating the importance of macrosystem-level norms, analysis suggested that such access negotiation was closely tied to the gendered positioning of girls' and boys' bodies and the coupling of social status to aspects such as physical appearance and sporting prowess. The power imbalance often associated with definitions of bullying (e.g. Horton 2021; Thornberg 2019) was, therefore, already present in the social skirmishes over resources. In general terms, this blurring of boundaries, or category overlap, suggests a gradual rather than dichotomous distinction between categories such as *social skirmish* and *bullying* in the sense, for example, of repetition and degree of harming/degrading gravity. It could be the case that students with a history of being bullied have the most problematic experiences, as skirmishes over resources may confirm their social stigmatisation and become incorporated into the ongoing bullying process.

School space 3: the wooded area

In contrast with the layouts at schools A and B, roughly a third of the playground space at School C was a wooded area. Teachers at the school considered that this space was difficult to manage, due to the limited number of teachers that could be out at any one time and also the design of the school, which meant that a teacher at the swing area or

football pitch could not see what was going on in the woods. A member of the school student health team suggested that it was the place where most school bullying occurred, and that conflicts often arose in connection to the building of tree huts. Likewise, an after-school leisure activities teacher pointed to the woods as a problem area due to the tree huts and the riding track (a track where some girls raced around and hopped over obstacles on the backs of imaginary horses). The teacher explained that different groups of students laid claim to different huts, and because the groups had breaks at the same times, they could be fighting over the same huts.

The wooded area was popular with many of the younger students, precisely because of the huts that they built there. However, it was, too, an area where students suggested that social skirmishes and bullying often occurred because of students taking sticks from other students' huts. For example, one second-grade boy suggested that school was 'pretty good, but there is a bit of bullying'. He referred to fights over sticks in the woods and explained how, even after someone told a teacher, the fights were not resolved and usually continued later. This boy and his friend said that such skirmishes happened 'nearly every break' and were caused by students taking sticks from other students' huts to make their own huts. The presence of such repetition in social skirmishes aptly illustrates the wider point about category overlap, where blurring can make it potentially difficult for students and teachers alike to determine where skirmishes might end and bullying could begin.

Further, two preschool class girls explained that a lot of skirmishes occurred in the wooded area because of students taking each other's sticks. They considered that this happened because of the scarcity of sticks in the woods, with one girl observing that most of the sticks had already been used to build huts and that the only way to procure more sticks was 'to try and take sticks from each other'. The girls explained that they were not allowed to go over a boundary which was marked with a stop sign, despite there being more sticks past that point. However, the girls had moved their hut to the edge of the boundary, suggesting the possibility that students might sometimes slip across the boundary to stock up on sticks when no one was watching.

The analysis of data demonstrates how skirmishes in the microsystem setting of one school's wooded area were shaped by macro- and exosystem-level environmental and structural elements that were closely related to the design and management of that space. The sticks represented a scarce commodity, due to the large numbers of students wishing to utilise them. Management of the boundary placed further restrictions on the supply of sticks, inadvertently fuelling the competition that led to microsystem-level social skirmishes. Thus, the girls' strategy of relocating their hut to the edge of the area can be understood as a covert attempt to counter the design and management of the space, and address the resource scarcity at the heart of the skirmishes.

Discussion

In this study, we have considered the complex connections between school environments, their resources, and the social relations between students. Our analysis of rich data has provided insight into how students' perceptions of resource scarcity can lead to minor conflicts. Such *social skirmishes* may, in turn, hold the potential to lead to, or become part of, more systematic bullying relations. Our findings highlight the

importance of thinking deeply, and sometimes differently, about how space is used in schools (Malone and Tranter 2003) and how the design and management of the school environment impacts social processes and relations within the school (Fram and Dickmann 2012; Francis et al. 2022; Frelin and Grannäs 2014; Gordon 1996). This means not only focusing on the behaviour of individuals or groups of individuals but also the ways in which the design of the school environment and the availability or lack of resources may affect that behaviour. Across the three microsystem settings presented above, it was apparent that resources played a significant part in social dynamics: in the *classroom* (school space 1), for example, it was evident that the starting point for minor conflicts was the lack of building blocks available for everyone to achieve their construction goals. In the *playground* (school space 2), it seemed that limitation on space and equipment was a contributory factor in skirmishes breaking out, whilst in the *wooded area* (school space 3), problems appeared to escalate from the restricted supply of sticks.

The analysis reflects the influence of environmental and structural elements connected to the meso-, exo- and macrosystem levels. For instance, dealing with issues of resourcing is far from straightforward, as resources in school contexts are finite and often significantly restricted for budgetary reasons: the option to provide more resource or capacity may simply be unavailable. Decisions made to resolve problems can sometimes inadvertently exacerbate them, as illustrated by the mesosystem-level decision to dismantle the building block constructions at the end of each week. Environmental resource constraints may mean that different structural solutions need to be attempted. However, while meso- and exosystem-level decisions (e.g. staggered breaktimes) might have potentially improved the situation in the wooded area, it must be borne in mind that such a solution would require further resources in terms of extra staff to monitor the space during the breaks (Horton, Forsberg, and Thornberg 2020).

Our study illustrates how macrosystem-level norms about schooling, appropriate school and class sizes, school design, and economic priorities affect what occurs in school settings, influencing the ability of students to negotiate access to certain spaces and resources. A broader implication here may be to place more focus on how the design and management of school spaces affects relational issues in schools from the outset. This relates strongly to the carrying capacity of schools (Malone and Tranter 2003) in terms of the number of students competing for use of the school space and associated resources. It emphasises that competition over scarce resources can constitute a school-based trigger for social skirmishes and more systematic bullying relations (Lambert 1999), which may be evident in unstructured and unsupervised spaces (Atlas and Pepler 1998; Leff et al. 2003) and in classrooms during unstructured times, too (Woolley 2019).

Limitations

This study is limited in the sense that it is based on research conducted at three schools in one geographical area of Sweden. The findings are thus not statistically generalisable and cannot simply be extrapolated from the research sample to the broader population (Firestone 1993). However, our findings can contribute to better understanding of the complicated links between the design and management of school spaces and the peer relations that might occur there (Firestone 1993). Likewise, we believe that this study will

be of interest and use to those in some other settings, due to the contextual similarity of school contexts with comparable environmental, structural and social elements (Firestone 1993; Larsson 2009). Indeed, a particular strength of this study lies in the insights it has generated through the use of ethnographic methods and in-depth qualitative analysis of rich data from specific places and spaces.

Conclusion

This study has highlighted the complexity and significance of the interplay between the school environment, resources, and social relations between students. It suggests that decisions made about the design of school environments and the distribution of resources can influence how those relations develop, and that competition for resources can influence social relations negatively. We argue that it is necessary to consider microsystem school settings in terms of the social interactions between students and the environmental, structural and social elements of those settings (Bronfenbrenner 1979; Zumbrunn et al. 2013), as well as in terms of the behaviour of students. As social skirmishes may contribute to feelings of insecurity in certain places and spaces, it points to the importance of understanding the implications of minor conflicts that take place in school settings, regardless of whether or not they develop into bullying situations. Moreover, the distinctions between minor conflicts and bullying may be gradual rather than dichotomous in terms of repetition, power imbalance, and gravity. Ultimately, insight into the interconnections between school environments, resources and relationships may help efforts to support the wellbeing of students.

Notes

1. In the Swedish education system, a comprehensive school provides education for students from 6–7 years of age through to 15–16 years of age.
2. This was not a regular seesaw but rather a piece of play equipment which was more swing-like in its movement; students often referred to it as 'the red swing'.
3. Here, the boy is referring to the bouncy seesaw.

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