

Meeting Students Where They Eat: A Qualitative Study Exploring K-12 Student Experiences of the School Cafeteria

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Abstract

Research into school cafeterias has largely focused on the nutritional content of food and what students consume. However, the cafeteria is also an important setting for understanding and promoting the overall well-being of students. Through 17 group interviews with 96 students, we conducted an open-ended exploration of their perspectives on the environment in which they eat. The interviews highlight a variety of stressors present in the cafeteria setting, including crowding, volume, and frequent adverse social interactions. We use the framework of proxemics and the concept of incivilities to reflect on students' experience of the social and built environment of the cafeteria, suggesting that a more positive lunch experience would offer a better balance of stimulation and privacy for students.

Keywords: school meals, cafeteria environment, student wellness, proxemics, incivilities

Introduction

Research in school cafeterias has largely focused on the nutritional content of the food, how accessible different types of foods are, and what students end up consuming (Byker Shanks, Banna, & Serrano, 2017; Cummings et al., 2014; Peckham, Kropp, Mroz, Haley-Zitlin, & Granberg, 2019; Terry-McElrath, O'Malley, & Johnston, 2015; Turner, Ohri-Vachaspati, Powell, & Chaloupka, 2016). Where there has been attention to the "cafeteria environment," this term has almost exclusively referred to the availability and accessibility of particular types of foods, namely making healthy foods more available and restricting access to less-healthy foods (Ang et al., 2018; Nollen et al., 2007; Terry-McElrath, O'Malley, & Johnston, 2014; Williamson, Han, Johnson, Martin, & Newton, 2013). Few studies have attended to the physical and social space of the cafeteria.

In this paper, we use a phenomenological perspective to explore students' lived experience of the school cafeteria. We suggest that the framework of proxemics and studies of incivilities offer ways to understand the atmosphere of the cafeteria and its effects on students' wellbeing and potential engagement with school lunch. First, we review the literature on the physical and social environment of the cafeteria. Then, we present students' perspectives on their cafeteria environment, drawn from student focus group data from the PreK-12 School Food: Making It Healthier, Making It Regional project. We discuss three major themes found in student comments: crowding, volume, and incivilities. Finally, we offer theoretical implications and practical suggestions that integrate understandings from proxemics and incivilities literature, highlighting the need to attend to the built environment of the cafeteria as well as the policies that govern the lunch period.

Literature Review

Cafeteria Environment

School spaces influence student experiences at school (Langhout & Annear, 2011; Maxwell & Schechtman, 2012; Ogden et al., 2010). Literature further suggests that the built and social environment of the cafeteria can influence student eating behaviors; however, few studies have explicitly examined the physical experience of being in a school cafeteria (Gorman, Lackney, Rollings, & Huang, 2007; Moore, Murphy, Tapper, & Moore, 2010; Rollings & Wells, 2018). In a systematic narrative review of related literature, Frerichs and colleagues noted school architecture and design related to student food consumption as an "emerging area of investigation" (Frerichs et al., 2015).

Research investigating the effects of cafeteria noise and crowding on student consumption has found an association between student consumption of fruit and whole grains and a less-crowded cafeteria, as well as between consumption of vegetables and whole grains and a less-noisy cafeteria (Graziose et al., 2019; Gross, Biehl, Marshall, Paige, & Mmari, 2018). Validation of a cafeteria environment assessment tool also confirmed an inverse relationship between student consumption of produce and crowding and noise in the cafeteria (Rollings & Wells, 2018). Jan Poppendieck (2010) noted that some schools saw improved social interaction at lunch time when teachers enforced lower noise levels and that the

dirtiness and crowdedness of the cafeteria may contribute to students' negative perceptions of school lunch. However, a study of the effects of cafeteria volume, illumination, temperature, and humidity on plate waste found only a small effect related to humidity, and little difference in student perceptions of these factors (Sanchez & Contreras, 2003).

In terms of the social experience of the cafeteria, some researchers have explored students' lack of time to eat and relax (Conklin, Lambert, & Anderson, 2002; Moore et al., 2010; Poppendieck, 2010). In the few studies that have directly asked students about their experience of school lunch, students reported long lines as well as the chaotic environment of the cafeteria as negative elements of school lunch (Asada, Hughes, Read, Schwartz, & Chriqui, 2017; Payán, Sloane, Illum, Farris, & Lewis, 2017). Amy Best noted that students enjoy the cafeteria as a more relaxed space than other school settings, seeing it as a place designed for play and socializing, where they have more freedom and feel less like they are "in school" (Best, 2017).

The analysis below aims to add to this literature by exploring how students across school levels report on their physical and social experience in their school cafeterias, with the goal of identifying strategies to mitigate the more negative features identified by students.

Methods

Procedure

This paper presents findings from a secondary analysis of data collected as part of the PreK-12 School Food: Making It Healthier, Making It Regional (MHMR) project; see Rosenthal and Caruso (2018) for a full reporting of that project's methods and findings.

Table 1. MHMR participating school district details, 2016-17 school year

District location	Total student enrollment	Students qualifying for free or reduced-price lunch (%)	Lunch participation (%)
Florida	186,332	68	60
Georgia	180,000	54	70
Iowa	32,979	74	66
Kentucky	100,063	68	68
South Carolina	17,301	35	68
Virginia	89,901	40	62

Note: Data on student enrollment and students qualifying for free or reduced-price lunch comes from the National Center for Education Statistics (U.S. Department of Education, n.d.). Each district provided its lunch participation rate (the average percentage of students participating in the National School Lunch Program each day).

In Phase 1 of the MHMR project, we conducted observations of school foodservice operations in each of the six districts presented in Table 1. These observations raised questions related to the student experience of school lunch, so we designed Phase 2 of the project to gather student perspectives. We visited two to four schools in each district and conducted one student group interview at each school, for a total of 17 group interviews in five high schools, seven middle schools, and five elementary schools (see Table 2 for details).

School foodservice staff in the district office recommended schools to visit, and school staff or faculty chose the students who would participate (often participants in a cooking or agriculture program or members of the student council). School staff or faculty also distributed parental consent forms, and only students who brought back a signed form and gave their own consent participated in the interview (see Table 2 for student demographic details). The study was approved by the Rutgers University Institutional Review Board.

Table 2. Demographic characteristics of participating students and schools

District location	School level	Number of students in interview	Age range of students in interview	Students qualifying for free or reduced-price lunch (school %)	Lunch participation (school %)
Florida					
	High	6	15-17	53	37
	Middle	5	12-14	52	43
	Elementary	3	6-8	100	98
Georgia					
	High	4	16-19	76	-
	Middle	3	13	26	-
	Middle	6	12-13	88	-
	Elementary	8	10-11	30	-
Iowa					
	Middle	8	11-14	78	92
	Elementary	7	8-10	83	-
Kentucky					
	High	7	15-18	32	35
	Middle	7	11-15	47	67
	Elementary	7	8-11	60	71
South Carolina					
	High	5	16-17	18	76
	Middle	3	11-12	55	69
	Elementary	6	8-11	100	77
Virginia					
	High	4	16-17	45	63
	Middle	7	11-12	53	82

		Total Students	Age range (mean, standard deviation)	Students qualifying for free or reduced-price lunch (school %) ^a	Lunch participation (school %) ^b
		96	6-19 (12.3, 3.3)	58	67
	High	26	15-19 (16.4, 1.0)	45	53
	Middle	39	11-15 (12.4, 1.1)	57	71
	Elementary	31	6-11 (9.4, 1.3)	74	82

Note: Data on students qualifying for free or reduced-price lunch comes from the National Center for Education Statistics (U.S. Department of Education, n.d.). Each district provided lunch participation rates. Lunch participation rate data were not provided for schools in the Georgia district or for the elementary school in Iowa.

^a Average of participating schools

^b Average of participating schools

Group interviews took place during the school day and lasted 45 to 90 minutes. In each interview session, after brief introductions, the students began by drawing their responses to prompts about the typical school lunch, a healthy lunch, and the experience of the cafeteria (Einarsdottir, Dockett, & Perry, 2009; Honkanen, Poikolainen, & Karlsson, 2018; Nomakhwezi Mayaba & Wood, 2015). The facilitator then led an open-ended discussion in which students used these drawings as a starting point to explain their experiences with and reactions to school meals, including the food and the cafeteria. As no standardized interview tools exist, we developed a basic interview guide, for use in all school levels, from the project research questions and based on our previous observations in schools and interviews with school foodservice staff (Rubin & Rubin, 2011). (See Rosenthal and Caruso (2018) for more detail on the drawing and interview prompts.)

Analytic Strategy

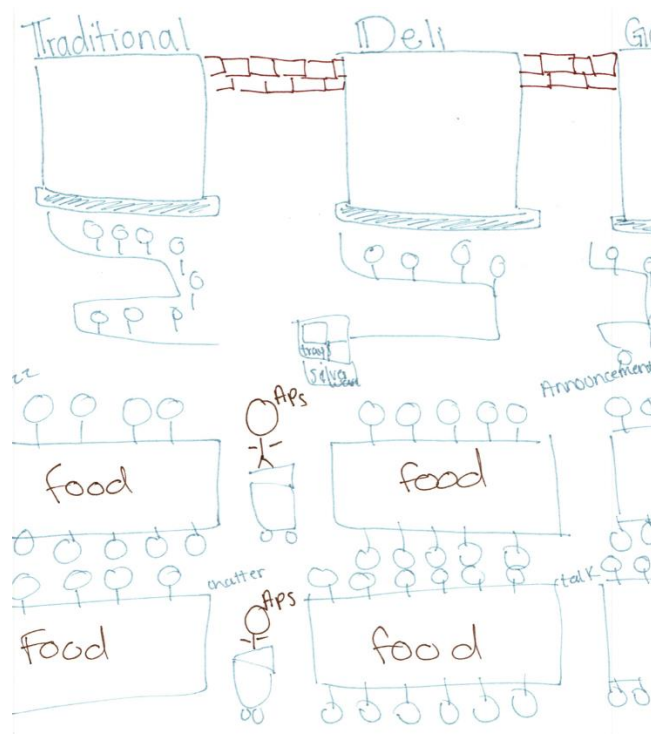
All student group interviews were professionally transcribed. As we analyzed these interviews as part of our primary analysis for the MHMR project, student experience of the cafeteria emerged as a salient theme worth further exploration. To do so, we used phenomenological analytic strategies and a grounded theory approach, based on the constant comparative method (Corbin & Strauss, 2014; Glaser, 1965). We developed a set of initial codes based on prior observations and discussion (Miles, Huberman, & Saldana, 2014; Saldana, 2009). Each author then read a set of transcripts, reviewed the others' work, and together we discussed any coding revisions and emerging themes until reaching theoretical saturation (Bradley, Curry, & Devers, 2007; Glaser, 1965).

Literature on using visual methods with children cautions against over-interpreting children's drawings, so we conducted only high-level content coding on student drawings in response to the relevant questions from the drawing exercise: "What is your cafeteria like during lunch? Who is there? What do you see when you go through the lunch line? What does it sound like?" (Darbyshire, Macdougall, & Schiller, 2005; Einarsdottir et al., 2009). We used these drawings to triangulate student comments in the group discussion. For triangulation we also used our own experiences while observing cafeteria environments as part of the MHMR project.

Results

Student descriptions of the cafeteria most commonly invoked concerns about crowding and noise in the cafeteria as well as the types of social interactions that flowed from or contributed to the physical experience. In Figure 1, for example, a student represents the tight spacing and long lines as well as the multiple sources of noise as salient characteristics of the cafeteria.

Figure 1. High school student drawing of cafeteria



While for ease of explanation we examine crowding, noise, and social interactions individually, it is important to note that students expressed these experiences as deeply enmeshed. Moreover, the inadequate amount of time typically allotted for the activities associated with lunch at most schools is a critical factor of students' experience of lunch overall. Although we do not discuss time explicitly, it is a contextualizing factor for the major themes presented here. Also, we note that while students often told us about negative experiences in the cafeteria, many highly valued and looked forward to their lunch time.

Crowding

The design of the lunchroom sets the stage for students' interaction with school foodservice. Students reported crowding as a concern in each middle school, three high schools, and two elementary schools. While students generally seemed to expect it in the cafeteria, and crowding was not found universally unpleasant, students often observed it as a problem.

Students noticed inefficiencies with the flow of movement through the cafeteria space, which affected their overall experience of lunch given the limited time they had available. They noted that bottlenecks form in particular locations, especially around doors (see Figure 2 for example). Several student interview groups, especially of middle schoolers, described how crowded the line could be, with terms like "a big jumble of people," "like a mob at the doors," and "just so squashed." A few described in detail concerns about the amount of space or the flow as they got their food and checked out, offering suggestions for improvements. For example, describing his drawing, one student explained, "Over here is the milk and over here is another milk. But the thing is there's only two registers so everybody flocks over here and over here, so it is impossible to get to the milk.... So, I think they should move this [milk cooler] inside."

Figure 2. Elementary school student drawing of cafeteria



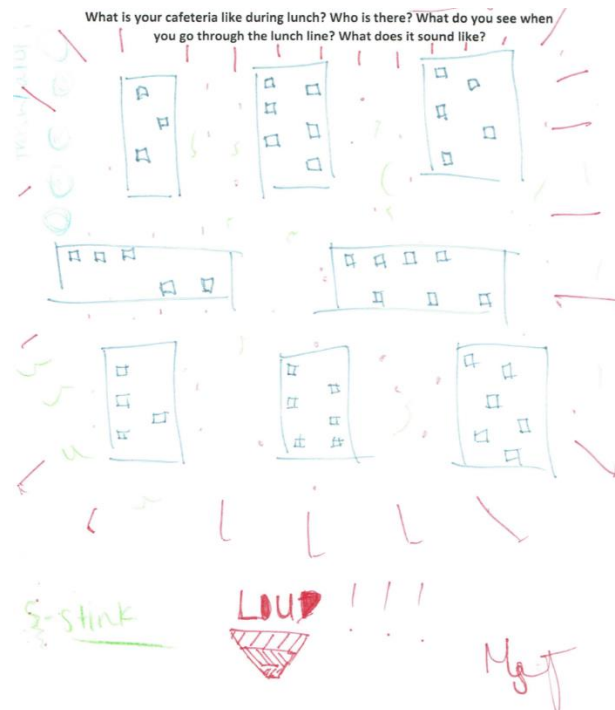
Moreover, there was a feeling that not enough room was provided in the seating area. Students were often packed in tightly without sufficient personal space to comfortably sit or navigate their immediate surroundings. One middle schooler explained,

See, these are literally what the tables look like. You have to stand up and, then, when you do stand up, if you're standing there, and I'm standing here, and we both stand up, we collide. And then, I turn, and I hit you with my tray. It just, it sucks, depending on who you're sitting by.

These crashes were described as problems of layout: tables were placed so closely together that students must either wait for each other to sit or stand, else unpleasant collisions will occur.

Students often expressed desires for greater choice and diversity of seating options. One middle schooler noted, "A lot of people are just rushing...because they want to be at the front so they can go get a good spot and they can sit by their friends." There was a sense that lunch is short, with little time to eat and socialize, so getting through the lunch line as fast as possible to find one's friends and the best seats was a preoccupation for students. More desirable options could take the form of more varied seating within the lunchroom, most of which were large, box-shaped structures with regularly spaced and identical seating, as well as the opportunity to choose other spaces to sit in for lunch. Students also expressed a desire to eat outdoors, as another student explained: "I think I would also like to have lunch outside, because sometimes just being in the school all day, being in classes. I want to see the sun. It would be nice to have tables outside where you can actually just relax with your friends." This wish for other spaces in which to eat was often expressed in terms of a need to escape unpleasant sensory experiences such as smells, noise and crowding, demonstrating an urge to find a haven from these adverse experiences.

Figure 3. Middle school student drawing of the cafeteria



Volume

Across schools, school level, and districts, students described their cafeteria as loud. In 14 of 17 student group interviews, at least one student commented on their auditory experience. Often students' first response to the question "What is your cafeteria like during lunch?" was "loud" or "noisy." In Figure 3 a student illustrates loudness with dashed lines encircling the cafeteria. Students emphasized their meaning using modifiers (such as "very loud," "very noisy," "really, really loud") or creative comparisons: lunch sounded "like a rock concert," "like a hurricane was blowing through," and "like people getting killed." Students reported the noise in a matter-of-fact way, signaling an expectation that cafeterias would be like this. A few specifically mentioned that they have become "kind of used to it," indicating their acclimation.

When asked directly about their feelings toward the noise, many described negative reactions. One elementary school student noted, "Sometimes there is a loud scream once in a while that gets, like, we get frightened." Some mentioned headaches, either aggravated by or as a result of the noise. Students most commonly expressed frustration with noise preventing normal socializing because it was difficult to hear one's friends:

Student 1: ...They really talk a lot, and it's really loud, and it's aggravating, and it gives me [a] headache sometimes.

Student 2: Especially when they're talking to a person that's either right next to them or in front of them.... A person right beside you, they're just screaming, and they're, like, right beside you, but they can't hear you.

Student 3: Sometimes, like, if me and my friends are talking normally, we can't even hear each other. That's how loud it gets sometimes.

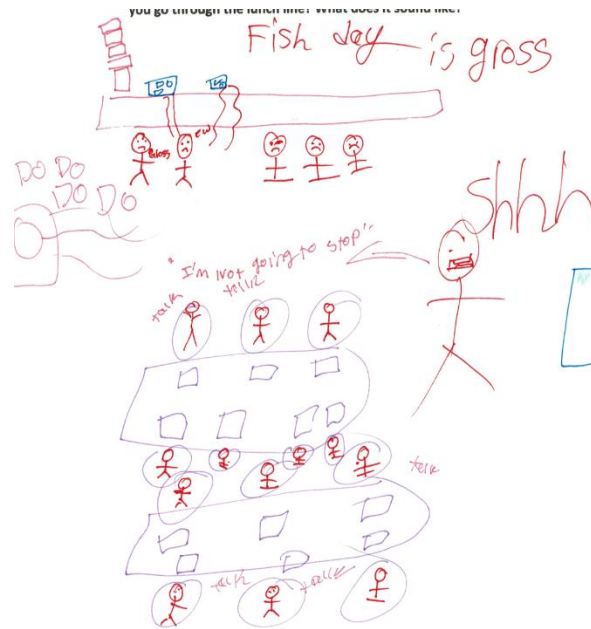
This cafeteria noise was perceived as enjoyable by some students, when it indicated or encouraged social interaction. One middle school student noted that the loudness in the cafeteria was "a good thing kind of," going on to describe the funny things his friends might say. However, he did qualify that the noise was a good thing "unless you have a headache, then that sucks."

The volume level was the major point of interaction for students and teachers or administrators in the cafeteria and often one of tension, especially as reported by elementary school students. In several elementary school cafeterias teachers used systems such as playing music, displaying different colors of cups on the lunch tables (i.e., red, yellow, green), or holding up fingers to indicate when students were allowed to speak or not. Students in two schools described these systems in detail, explaining that they responded to the rules by self-disciplining in order to avoid group punishment.

However, students also reported trying to evade the rules (for example, by trying to sit away from lunch monitors) due to frustration at limits on their ability to socialize. As one student noted, "Sometimes we don't really get to talk a lot because we have silent lunch through the whole [time]." Describing a cafeteria in which students were not allowed to talk when the teachers played classical music, a

student said, "I think they should have no music, 'cause lunch is time for a break from learning and interacting with people, and sometimes they'll have the music on the whole lunch." When silence was enforced in the cafeteria, as one student noted, "The only time we interact is recess."

Figure 4. Elementary school student drawing of the cafeteria



Elementary school lunch monitors, as well as those in secondary schools, were also seen as contributing to the noise. Students reported that teachers or administrators attempted to make themselves heard over the students by using whistles or clickers, or most often by "yelling," sometimes through sound equipment. In Figure 4, the student conversation is eclipsed in scale by the adult figure shushing them. In one middle school, "[The administrators] do this thing where they count down from five... If everybody's not quiet by the time you get to five he yells even louder through the microphone. And louder, and louder, and louder. And it's just—it's awful."

Overall, the noise of the cafeteria and attempts to manage it seemed to create an experience that, for the most part, was not positive for the student experience of lunch. It might be physically unpleasant, frustrating to attempts to relax, and even threatening, as students shouted at one another and teachers yelled at students. The cafeteria environments described did not seem to promote, and may even inhibit, the possibility of positive social interactions among students and between teachers and students.

Incivilities

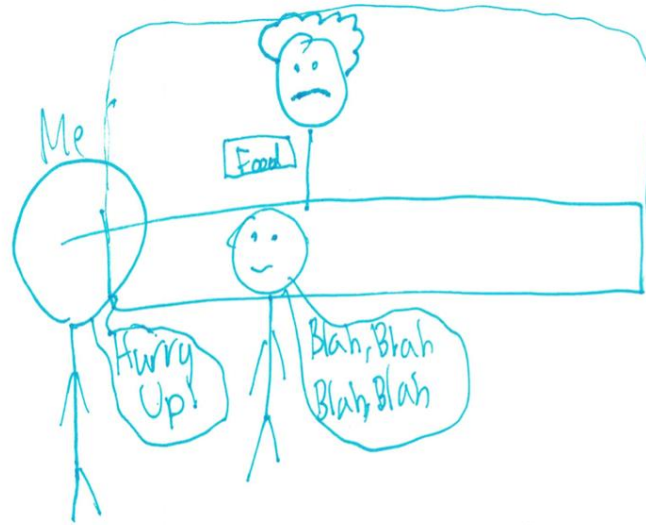
Students reported several types of "incivilities" in the cafeteria. We use this term to categorize a range of anti-social interactions that students experience as rude, unwelcome, antagonistic, or aggressive (Caza & Cortina, 2007). These may occur

among students or between students and cafeteria staff or other adults. Similar to the noise of the cafeteria, students generally reported these interactions as negative; however, they also may give them little emotional interpretation or may seem habituated to these types of experiences. For some students, particular incidences or the overall atmosphere offered experiences of fun and freedom.

The least-aggressive types of incivilities noted were instances of bad behavior or bad manners, such as using curse words, not picking up food that was dropped, or talking while eating. Food left or thrown on the floor both disgusted other students and led to incidents of slipping and falling. Students in almost half of the schools described instances of throwing food or food fights in their cafeteria, a slightly more aggressive form of incivility.

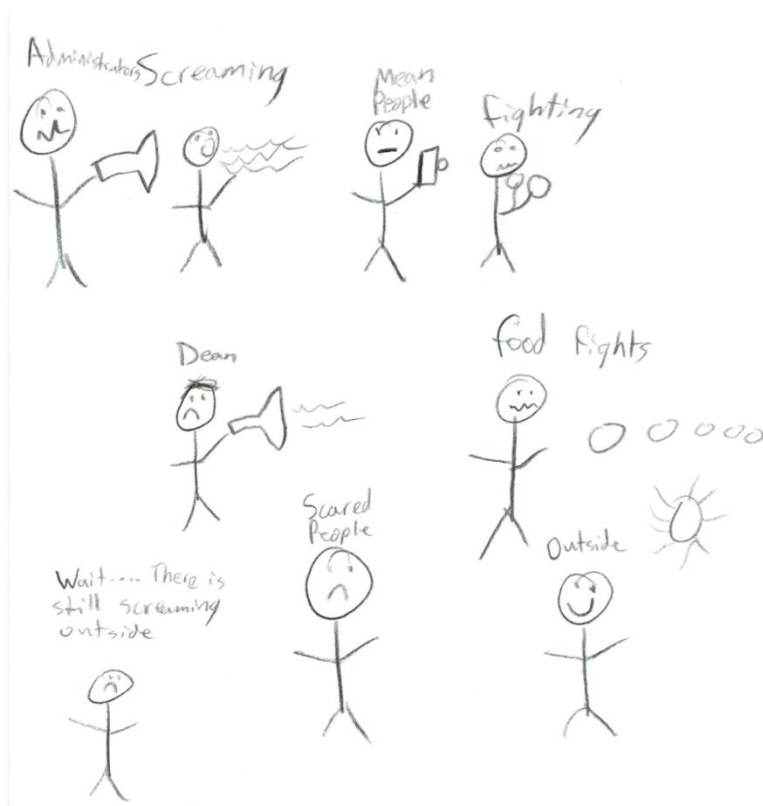
In some schools students commented specifically on students or teachers screaming or making noise. As noted above, one group of elementary schoolers reported getting frightened at random screams from other students. A few students also reported others screaming curse words, which older students might interpret as "funny" but younger ones did not. In addition to adding to the volume of the cafeteria, such screaming can also be considered a form of antagonism, particularly in cases where teachers or other adults used volume or noise to try to elicit certain behaviors, such as quieting students down or encouraging them to hurry. One student described an administrator banging on her table to get students to leave the cafeteria.

The cafeteria line was identified as the site of many incivilities. In every middle school, students described waiting in line as an experience of being crowded and jostled, with students "pushing and shoving" and acting "crazy" and "rowdy." One student said, "People try going over me, beside me, squeezing, doing whatever they can." At least one middle school and one high school group noted the advantages of being physically bigger when in the lunch line. Some middle schoolers and especially high schoolers also reported issues with other students skipping ahead of them in line. A few admitted to the practice, and the rest seemed to consider it an annoying yet inevitable reality of the cafeteria line. Figure 5 depicts the eagerness of the student to move through the line.

Figure 5. Excerpt from middle school student drawing of the cafeteria

Disputes over place in line might turn more contentious. As one middle schooler noted, "When people cut they don't give it a second thought, but when you cut them they get all triggered and cuss at you." Another noted that when in line, "Sometimes we have arguments over who should go first," and when asked if it became aggressive, he said, "I wouldn't say aggressive but... they're kind of mean." One high schooler described the line as a place of "rough housing." This chaos gave opportunities for students to practice other incivilities, such as stealing milk.

Physical violence also becomes possible within this uncivil environment. The drawing in Figure 6 depicts both food fights and physical fighting, along with other forms of aggression such as screaming. One high school and two middle school groups specifically reported witnessing fights. While one of the middle school groups noted that these happen "occasionally," the other noted that "there are so many fights at lunch." In the high school group, two female students tried to minimize the fighting saying, "It's not that serious" and "Every school has fights." A male student persisted in describing "Samantha's fight... when that dude slammed her into a table," and one of the female students moved quickly to cut off the conversation. While this was the only incident we heard about in such detail, its extreme nature alerted us to not only the potential for serious violence in the cafeteria but also the level of habituation to such incidents that students may develop.

Figure 6. Middle school student drawing of the cafeteria

Most students described the overall atmosphere of the cafeteria as negative, using words like “crazy,” “chaotic,” “hectic,” “scary” and “not fun.” As with the loud volume, some seemed habituated to it, accepting it as normal for that environment. A few students alluded to the opportunity for fun and freedom. Describing her drawing of the cafeteria, one middle school student said, “I put loud and lit, which means it's fun, and you're with your friends, and you feel like you can just, like, do anything.” Another student immediately responded, “But you can't,” highlighting some of the underlying tension of the student cafeteria experience. These tensions were also evident in a comment from a student in a different middle school, who said, “It's fun, but it's not great.” While lunch might offer the chance to socialize, blow off steam, and act more uncontrolled, such an atmosphere may not be or feel safe or even positive for all students all the time.

Discussion

Descriptions of their experience at lunch indicate that for many students, the cafeteria is an unpleasant and sometimes even hostile space, where students experience physical discomfort, constrained social interaction, and even fear. While many students seem to have acclimated to loud, chaotic, crowded cafeterias, these spaces seem unlikely to encourage student social, emotional, and physical wellbeing (Langhout & Annear, 2011; Maxwell & Schechtman, 2012). Nor does such a cafeteria space seem conducive to efforts at health promotion.

In this section, we reflect on the findings in terms of the interactions of incivilities and proxemics as factors that shape students' meal experience and impact wellbeing. We see that incivilities and their impact may be amplified by the spatial organization of typical cafeterias, which are not designed for student control over personal space and privacy. Lunchroom rules may also fail to prevent students from experiencing incivilities and may even contribute to them.

Implications for Theory: Understanding the Space and Place of the School Cafeteria

Frerichs and colleagues (2015) suggested that literature from the field of proxemics can help make sense of the cafeteria environment. Proxemics provides a conceptual framework to understand how spatial factors influence both individual experiences and social interactions (Hall, 1966). Edward Hall and colleagues laid out the ways in which violations of spatial norms, in domains including touch, voice loudness, and smells, can cause misunderstanding as well as stress and conflict. Students regularly experience loudness and crowding in the cafeteria, which may lead to discomfort as these sense experiences violate expected boundaries.

The notion of personal space flows out of this early work on proxemics, and research has focused on the conditions of personal space that contribute to discomfort and stress (Lang, 1987; Namazian & Mehdipour, 2013; Sundstrom & Altman, 1976). Aiello and Aiello (1974) investigated the development of personal space practices among children, finding that children use more space as they mature and adopt adult social space norms around age 12. This suggests that most of the students in our study would have already developed or would be close to having fully developed adult social space norms and thus could be expected to be impacted by infringements of personal space experienced in the cafeteria.

Robson and Kimes (2009) theorized that diner satisfaction is associated with the experience of personal space, observing the need for a balance between privacy and stimulation. In the cafeteria context, we understand privacy as the ability of students to manage their own personal space, contrasted with the stimulation of noise and crowding (Namazian & Mehdipour, 2013). Stimulation can also take the form of incivilities that may further disrupt the student lunch experience and social wellbeing. Caza and Cortina characterized incivility as "low-intensity deviant behavior," a more common and more minor form of antisocial behavior than severe forms of aggression but compounding over time, with adverse effects on wellbeing and therefore requiring attention (Caza & Cortina, 2007, p. 335).

The types of incivilities students most often describe are not targeted towards any individual in particular but rather are "low-level deviance" instigated and witnessed. Students tended to describe these activities, such as leaving messes, throwing food, and shouting, in a way that indicates disruption to their own enjoyment of the cafeteria space. While perhaps such incidents are not surprising in a cafeteria full of largely unsupervised children, these uncivil behaviors and interactions underscore the lawless and chaotic feeling of many cafeterias; the seemingly unregulated space of the cafeteria can ultimately allow for more serious infractions, like physical violence (Killam, Roland, & Weber, 2013).

The challenges presented by the design and organization of the physical space may exacerbate the social disruptions and vice versa. We see this particularly in the cafeteria line, where students explicitly stated that the crowding and desire to move quickly through the line leads to aggressive behavior, such as shoving and cursing at other students. In the eating area, as volume rises, adults will try to regulate the sound by shouting at students—which not only further contributes to the loudness but also is experienced as an incivility by students.

Incivilities become more salient in the context of a space that provides no privacy or mediation from unwelcome stimulation and social interaction, as is the condition of many school cafeterias where all students must occupy a single space, over which they have little to no agency. While individual incidences of aggression occur at times, it seems to be the constant flow of minor incivilities, compounding other sources of physical discomfort in an environment where students cannot manage their own personal space, that form the lived experience of students in the cafeteria.

These negative social and physical experiences can have implications for students, increasing their stress and diminishing their overall social and emotional wellbeing at school (Gorman et al., 2007; Maxwell & Schechtman, 2012; Ogden et al., 2010). Further, the stress of the cafeteria could create a negative disposition in students towards school lunch in general. Caza and Cortina (2007) found that incivilities instigated by both those with higher and similar social status cause negative consequences for mental health and wellbeing among college students. They noted decreased engagement with institutions in which students experience incivilities, which could be applicable in the school cafeteria. If students internalize a felt sense of unfairness or injustice attributed to the institution, as students in our study express about their cafeterias, it is likely to contaminate both their view of the school and school lunch.

Implications for Practice: Taking into Account a Student-Centered Perspective for Policy and Design

What would students prefer? Largely they expressed a desire to socialize and relax at lunch. As one high school student noted, lunch is their chance to “take a little break in life.” Even elementary school students said that lunch is their opportunity to socialize. The physical environment can interfere with this desire, for example, if the cafeteria is too loud to talk to one’s friends or if other students are perpetrating incivilities that prevent a sense of relaxation. Some students spoke positively of opportunities to eat lunch outside of the cafeteria, such as on a patio or in a classroom, seemingly away from the noise and chaos (see Figure 7 for an example).

In the language of the proxemics literature, students are articulating a need for balance between stimulation and privacy (Robson & Kimes, 2009). They would like the opportunity to talk to their friends but without the cafeteria getting too loud. Especially older students want to be with their friends, but not crowded with too many others (Maxwell & Schechtman, 2012).

Extending this idea to the social realm, we can see the chance for uncivil behavior, especially talking too much or too loudly, as a proxy for the freedom to relax from “classroom” behavior and to socialize, as noted by the students who describe the cafeteria as “fun” or “lit.” However, this stimulation becomes problematic as it spirals into unwanted incivilities, what we might see as “negative” stimulation or invasions of student personal space. As a result, while students want the cafeteria to allow for “fun,” they also express a desire for regulation, especially of the line and of volume, for greater calm and safety (Langhout & Annear, 2011).

Figure 7. High school student drawing of the cafeteria



One high school we visited seemed to have found ways to provide a better balance of stimulation and privacy for students, using adjustments to both the physical and social environment of lunch. In the recently renovated cafeteria, acoustic absorbers helped moderate sound. Students described the experience of volume in this cafeteria as loud but tolerable, acknowledging the role of design, saying, “they've got a lot of sound dampeners. They kind of designed the school to be pretty quiet in a loud area.”

Further, the cafeteria was a big space, designed to avoid crowding in the eating area and to offer different types of seating, including booths and high tables. Students were allowed to eat in many other school spaces, such as the library and certain hallways, making the cafeteria itself less crowded.

Student 1: I don't think it's overcrowded either because I mean, we've got the outside space.

Student 2: We have enough room...

Student 3: We have another outside area outside the library, picnic tables...

Student 2: We can sit out anywhere out there...

Student 1: We can sit in a lot of different places....

This policy opens different types of environments for students who might prefer less stimulation than a typical cafeteria.

Students expressed a positive and mutually respectful relationship with the teachers and administrators regulating the lunch period, saying "They can trust us." Students took seriously the responsibility to maintain good behavior to allow the continuation of the privilege of eating where they choose. The student group described an enculturation process for the incoming students meant to preserve the current lunch policy: "The big thing every year, at the back-to-school thing, they're like, 'Freshman, you've got to keep the lunch.'... If it's not possible, they'll be mad at you forever."

In this contrasting example of a high school cafeteria, students appreciate the design of the lunchroom, as well as the opportunities to eat in a variety of spaces. What comes through in speaking with these students is that the design interventions and practices promote an overall more positive lunch experience.

Conclusion

Based on our interviews with students, we find that many cafeteria environments do not provide a space that students interpret as positive. Based on findings from literature on proxemics and incivilities, we suggest that these negative experiences of the physical as well as social environment of the cafeteria might affect student well-being as well as their engagement with school meals. As students describe it, a more positive lunch experience would offer a better balance of stimulation and privacy, which requires changes to both the built environment of the cafeteria as well as the policies that govern lunch.

Sound dampeners as well as design improvements to create a better flow of the lunch line and greater spacing at cafeteria tables could minimize student stress due to crowding and loudness in line and while eating. Offering a greater variety of spaces for students to eat also responds to individual differences in desire for stimulation, providing calmer and quieter spaces for students who need or want that while eating.

A better balance between over- and under-disciplining students could also improve the student lunch experience. Students might welcome more oversight in the lunch line and in some cases in eating areas to regulate incivilities like throwing food and playing loud music. However, harsh discipline such as enforcing silent lunch or banging on tables seriously interferes with students' positive enjoyment of lunch.

Our findings are limited by our reliance on students selected by adults as well as on students' self-report about their attitudes and behaviors in the cafeteria, which may not align with what they do or feel in practice. Students may have expressed stereotyped attitudes about the cafeteria or have felt pressure to respond to the researchers in their capacity as adults (for example, by expressing disapproval of

behaviors that they may engage in or enjoy). Students also may have been influenced by others in the discussion group and not expressed dissenting opinions.

Future research should further explore these themes with students for a better understanding of how students behave in the cafeteria, especially at different age levels, and the effects on both their wellbeing and engagement with school meals (both participation in school lunch and what they ultimately consume). Due to space limitations this paper did not include an in-depth discussion of the time allotted for lunch, which deserves further exploration. Understanding of the cafeteria space would also be enhanced by including the perspectives of adults in the cafeteria, including school food service staff. Specifically, we recommend using a student-centered Post-Occupancy Evaluation (POE) framework to identify stakeholder areas of interest and concern regarding the space of the cafeteria in their schools. POE is an approach to investigating buildings and spaces that aims to involve all stakeholders to generate recommendations that improve the experience of these spaces as well as promote the wellbeing of all occupants (Wheeler & Malekzadeh, 2015). Finally, any suggestions for interventions to improve student experience of lunch should be tested in practice in actual cafeterias. Ideally, student-generated interventions would ultimately improve their experience of the cafeteria space, with positive ramifications for student wellbeing.

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