Recess Placement Prior to Lunch in Elementary Schools: What Are the Barriers?

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Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.

ABSTRACT

Objectives
Studies have shown that children who have recess placement prior to lunch as an alternative to after lunch consume significantly more food and nutrients and waste less food. Yet, according to the School Health Policies and Programs Study, only 4.6% of elementary schools schedule recess prior to lunch (Wechsler et al., 2001). Therefore, based in part on this evidence, it is important to investigate the barriers to recess placement prior to lunch.

Methods
Using focus group research methodology, the National Food Service Management Institute Applied Research Division conducted a study to determine barriers to scheduling recess prior to lunch in schools participating in the National School Lunch Program. After pilot focus groups in a Midwest district were performed, focus group meetings were conducted with homogenous groups of school administrators, school nutrition personnel, teachers, and parents from three school districts in Colorado, Kentucky, and Maine. There were four focus groups in each district, one for each set of stakeholders, held on the same day in each district, with 21-26 study participants per district.

Results
The barriers most frequently mentioned by administrators included: a) preservation of morning hours for academics; b) logistical concerns of supervision, hand washing, and cold weather clothing; c) possible resistance by faculty, staff, and parents; and d) tradition. The barriers most frequently mentioned by school nutrition personnel included: a) supervision; b) movement of children on and off the playground; c) scheduling; and d) cold weather clothing. The barriers most frequently mentioned by teachers were: a) logistics; b) academic priorities; c) willingness of administrators; d) exercise; e) weather; f) scheduling blocks; and g) tradition. The barriers most frequently mentioned by parents were: a) logistical concerns, such as scheduling, staffing, and space; b) winter clothing; c) nutrition beliefs; d) previous experiences with a family member; e) tradition; f) behavior; and g) communication.

Application to Child Nutrition Professionals
The results of this qualitative study provide useful information to school personnel, parents, and state agency professionals in effectively considering the implementation and promotion of recess prior to lunch.

INTRODUCTION
The U.S. Department of Agriculture (USDA) Food and Nutrition Service reports that the National School Lunch Program (NSLP) is operating in nearly 100,000 public and non-profit private schools and residential child care institutions. The NSLP provides nutritionally balanced lunches to more than 28 million children each day (U.S. Department of Agriculture, 2005). The benefits of school meals to children include improved nutrition, health, and well-being; promotion of growth and development; protection against diseases and chronic health conditions; and development of good eating habits (Buzby & Guthrie, 2002). However, a review of plate waste in school nutrition programs conducted by the USDA Economic Research Service (Buzby & Guthrie, 2002) found that in addition to the direct cost of food, plate waste may reduce the nutritional benefits that children receive from the NSLP. An environmental factor that affects consumption and food waste is the placement of recess in relation to the lunch period.

Studies have shown that children who have recess placement prior to lunch instead of after lunch consumed significantly more food and nutrients and wasted less food. Bergman et al. (2004) found that a Washington school with Third through Fifth Grades (n=1119) that had recess prior to lunch had 27.2% food waste, as compared to 40.1% in a school with Third through Fifth Grades (n=889) that had recess after lunch. Also, the intake of calories and nutrients such as calcium, vitamin A, and iron was significantly greater for all students when recess was scheduled prior to lunch (p < 0.0001). A study conducted in an Illinois school with First through Third Grades (n=67) (Getlinger et al., 1996) found that overall food waste decreased from 34.9% to 24.3% when recess was scheduled before lunch. The study also found that recess after lunch tended to cause stomach discomfort and dizziness in many students. Researchers concluded that recess scheduling is a factor that teachers, school nutrition staff, and school administrators can control to enhance student achievement.

Ruppenthal and Hogue (1977) conducted a plate waste study in a California school with First through Third Grades (n= 90) and found that vegetable, salad, fruit, and milk waste decreased when recess was scheduled before lunch. Based on the study results, school administrators scheduled recess before lunch and did not receive any complaints from parents or students. Smith (1980) described positive experiences he enjoyed as a principal when recess was scheduled before lunch in his California school. He found that plate waste decreased and students returned to the classroom ready to learn. Read and Moosburner (1985) found that Fourth- and Fifth-grade students in a Nevada school wasted less milk when recess was scheduled prior to lunch. The Montana Team Nutrition Program worked with four schools to promote its Recess Before Lunch policy (The Montana Office of Public Instruction School Nutrition Programs Pilot Project Report, 2003). Program administrators found that the average amount of food and beverage waste decreased after policy implementation. Surveys of school administrators, teachers, and school nutrition personnel found that the atmosphere in the cafeterias was more relaxed, quiet, and conducive to eating. They also found there was a dramatic decrease in discipline problems on the playground, in the lunchroom, and in the classroom, and that children returned to class more settled, calmer, and ready to learn. Focus groups of children shared that they liked being able to play prior to having lunch.

The Montana Team Nutrition Web site [http://www.opi.mt.gov/schoolfood/RecessBL.html] provides a guidebook with resources and supporting information that school personnel can use to create a plan to implement recess prior to lunch. The guidebook was developed after the
completion of the Recess Before Lunch project (The Montana Office of Public Instruction School Nutrition Programs Pilot Project Report, 2003). Many benefits of scheduling recess prior to lunch have been documented. Yet, the School Health Policies and Programs Study indicates only 4.6% of elementary schools schedule recess prior to lunch (Wechsler, Brenuer, Kuester, & Miller, 2001). Therefore, it is important to investigate barriers to scheduling recess prior to lunch.

**METHODOLOGY**

This study used a focus group methodology to explore barriers to recess placement prior to lunch in elementary schools as perceived by school administrators, school nutrition personnel, teachers, and parents. *Focus Groups: A Practical Guide for Applied Research* (Krueger & Casey, 2000) was used as the basis for developing the research method. Data were collected in a systematic approach by asking semi-structured, open-ended questions. Each question had a distinctive function in the focus group research process. The Eastern Michigan University Human Subjects Committee and The Ohio State University Internal Review Board approved the research protocol and focus group questions.

**Participant Selection**

School districts were selected to include four USDA regions (Midwest, Mountain Plains, Northeast, Southeast) and current recess placement after lunch in elementary schools. These four regions were selected so that this study would involve opinions from diverse participants in different areas of the United States. Foodservice directors in these regions were contacted via phone and E-mail to determine current recess placement and their willingness to host focus groups in their districts. Focus group participants were invited by the researcher and/or the school nutrition personnel in the district.

**Focus Group Meetings**

Four pilot focus group meetings, one for each type of participant, were conducted with school administrators, school nutrition personnel, teachers, and parents (n=22 total) from elementary schools in Novi, MI. School administrators included principals, assistant principals, superintendents, and district health administrators. School nutrition participants included food and nutrition directors and supervisors, managers, nutrition assistants, and lunch supervisors.

Pilot focus group meetings were convened in Denver, CO (n=24 total), Kenton County, KY (n=21 total), and South Portland, ME (n=26 total) during Spring 2005. Following the pilot focus group meetings, a review of the focus group questions and plan was completed. The researchers refined and finalized a series of questions designed to explore barriers to recess placement before lunch in elementary schools. The questions were as follows:

- Please tell us your name and the first thing that comes to mind when you hear the word "recess."
- How do you feel about recess before lunch?
- Are you aware of the research that shows children eat better, waste less food, and behave better with recess scheduled prior to lunch? Can you share your thoughts about this?
• What is the greatest barrier to having recess prior to lunch?
• What is the greatest barrier to scheduling recess prior to lunch?
• What would it take for you to change your schedule to recess prior to lunch?
  (administrators only)
• Are there specific issues that affect (teachers, school nutrition personnel, parents only) regarding recess before lunch?
• How could administrators be convinced to schedule recess prior to lunch?
• Is there anything we should have talked about but didn't?
• Of all the topics we discussed, which one is the most important to you?

The same individual moderated all of the focus group meetings. The assistant moderator/recorder compiled notes. Throughout the focus group sessions, the moderator used a structured approach to keep the discussion focused on the selected questions. Each focus group session was tape recorded and transcribed so that a complete record of the discussion was available for analysis.

**Data Analysis**

The pilot focus group transcripts were not included in the analysis. The "long table" methodology of Krueger and Casey (2000) was used to analyze transcripts from the focus group meetings. In this method, the transcripts were color-coded by location, cut apart by comment, and arranged by content on large sheets of paper. Independently, researchers also conducted a systematic, question-by-question, analysis of the transcripts. Then comments for each question were thematically categorized and summarized.

**RESULTS AND DISCUSSION**

Comparing the summarized comments from each session revealed a series of 13 themes that occurred throughout all focus group discussions. Comments from school administrators, teachers, and school nutrition participants focused on district-wide and school-wide issues, while comments from parents were more likely to be school-specific and child-specific, rather than across schools.

Barriers most frequently mentioned by administrators included: a) preservation of morning hours for academics; b) logistical concerns about supervision, hand washing, and cold weather clothing; c) possible resistance by faculty, staff, and parents; and d) tradition. School nutrition personnel most frequently mentioned the following barriers: a) supervision; b) movement of children on and off the playground; c) scheduling; and d) winter clothing. Barriers most frequently mentioned by teachers were: a) logistics; b) academic priorities; c) willingness of administrators; d) exercise; e) weather; f) scheduling blocks; and g) tradition. Parents most frequently mentioned these barriers: a) logistical concerns about scheduling, staffing, and space; b) winter clothing; c) nutrition beliefs; d) previous experiences with a family member; e) tradition; f) behavior; and g) communication.

Tables 1-4 summarize the identified themes, with the type of participant identified. Quotations of representative comments are italicized. Despite the barriers that were identified, participants predicted positive outcomes for recess prior to lunch, including less food waste, better
consumption of nutritious lunches, behavior improvement, and the potential to solve recess conflicts during lunch instead of during afternoon classes (Table 1).
Table 1. Representative comments from school personnel and parents regarding benefits to scheduling recess prior to lunch

**Better Nutrition and Less Food Waste**

School Administrator

“We know other schools that have tried it (recess prior to lunch) have testimonials that the nutrition intake is improved, and that they make better choices and eat more thoroughly when they are not rushed to eat outside to play.”

School Nutrition Participant

“I think recess before lunch would be a good idea. We see kids come in to lunch from sitting in the classroom, but what they really want to do is go out to play. They go through the line, dump their trays, and raise their hands to go outside. They don't eat because they want to go outside to play. But if they had recess first, when they come in, their appetite is increased. They come in and they want to eat more.”

Teacher

“I can see where they would eat more. Now they just want to get out to recess. That's a big thing. I can see where they would eat more and they would probably eat slower knowing they have to go back to class...”

“I know there must be statistics on the amount of food that is wasted. It must be tremendous. Part of it is they may not have the appetite or they just want to go out and play. Whereas if it were reversed, they may work up an appetite, and there is not that urgency to get to class like there is to get to recess. That would probably carry some weight.”

“The most important thing is 'What is better for the child?' We have a low socioeconomic area and in my school we have a large population of free and reduced lunch participants. If we know they are getting one wonderful meal and they are eating, to me whatever is in the best interest of the child (their behavior improves, they are eating better and more healthy foods) is the priority, not scheduling and everything else that comes, even the politics of a school. The child needs must come first. If it is proven to be better in a large sample of schools or kids, then it is definitely worth pursuing.”

**Behavioral Issues Associated with Recess and Lunch**

School Administrator

“What they get now is the flip side, and all of the problems on the playground (fighting, who did this and that) come in with them.”

“It is very inviting to think about kids behaving better in the cafeteria because that is a problem.”

Teacher

“It might be a good idea to try it with a couple of classes to begin with, to gradually implement it to ciet results. Better behavior would be a selling point.”

Parent

“Each school community is different. The needs are all different. Whatever needs you have, if there are discipline problems or some obesity problems or what have you...If you think this program would be helpful, meet with your principal and discuss...”

“Ability to re-focus, re-group, to get back on task with a full meal.”

“If they had recess first it wouldn't be as hard on the teacher to try to get them back...calm down and relax at lunch...that would be an advantage for a lot of kids.”

“They almost need recess toward the end of the day because they seem more physically active.”

**Conflict Management**

School Administrator

“Just thinking about the conflict management piece, has anyone tried a conflict management center in the cafeteria? One of the things that happens when they come in off the playground is they tell the teacher what happened on the playground. 'So and so took my ball' and the teachers are not sure what to do. We could have a conflict center in the cafeteria to work out the problems there.”

Teacher

“At our school we had recess before lunch and we alternated. We loved it because we
The key barriers that participants discussed included preservation of morning hours for academic subjects, supervision concerns on the playground and in the cafeteria, hand washing concerns, and coats and cold weather clothing (Table 2). The timing of lunch was an issue of concern for some focus group participants (Table 2). Parents wondered if children who did not eat breakfast would be too hungry if lunch was moved to a later time. The school district in Maine included a time for eating morning snacks that were brought to school by each student. The timing of the snack was a concern, because in some schools it was scheduled too close to lunch. If morning snacks are part of a school schedule, then the timing of snacks should not be too close to lunch. School nutrition personnel did not foresee any barriers for having recess prior to lunch as relating to their job responsibilities (Table 2).
<table>
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<th><strong>Preservation of Momemt</strong></th>
<th><strong>Hours for Academics</strong></th>
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| **School Administrator**  | "I've always felt kids are more focused and responsive in the morning in the regular classroom. We need proven facts that they can learn as well in the afternoon, especially in reading and math areas."
| **School Nutrition Participant** | "The school curriculum because they have so much they have to pack in with the literacy." |
| **Teacher**                | "Well, we have a six hour school day with upwards of 425 students in recent years. Try to work different shifts in of different grade levels that are compatible within a time that is appropriate to be eating lunch, where you can take full advantage of the cafeteria staff, the lunch aides, the playground. Make it work well - utilize the people and the space. I think that has been more of a consideration, the order that it happens, to get everybody fed in a window of time that is reasonable."
| **Parent**                 | "I'm concerned about taking time away from the morning. Articles and things that I've read claim morning time is a critical time to learn, that students are more alert, especially the younger children..." |
| **Supervision Concerns**   | **School Administrator** |
|                           | "As long as they are disciplined about getting the children in, then your cafeteria schedule will go according to schedule. If not, that could cause problems. That could be a barrier I would think. If the teachers aren't disciplined about getting the children into the building in time to take care of toiletry needs, then the class behind them is slowed down."
|                           | "Also, supervision. If you have recess before lunch, you really need someone to take them into lunch. If you have recess before lunch, that is one less person out on playground supervising kids."
|                           | "... on the larger playgrounds you want to make sure that you have enough coverage for safety of the kids. To take one supervisor off is a concern."
| **School Nutrition Participant** | "If they did that (staggered students entering the lunchroom from the playground), the children wouldn't like that because some would get a longer recess. We don't have enough people."
|                           | "We used do it and they (the students) liked it. The problem was having enough people when we came in. I do agree that the children would like it. The children go from sitting in a classroom to sitting down at lunch. This way they can run, run, run for a half hour and then sit down."
| **Teacher**                | "That was part of the reason it took so long. They also had to take off their coats and had to hang up their coats on their coat hooks. That would be hard with a limited number of lunch aides."
| **Parent**                 | "I'm worried about who is going to watch the kids... who's going to be out on the playground with the children? There are not enough staff out there with the kids now."
| **Hand Washing Concerns**  | **School Administrator** |
|                           | "It's hard to have enough supervision in our schools and to take somebody away to line the kids up, and take them inside for hand washing procedures. These are concerns that schools would have to work out regarding the logistics to make this happen."
|                           | "... how they will wash their hands before they eat?"
| **Teacher**                | "They would have to stop someplace and wash their hands. They use the closest one (restroom) to the classroom..."
Table 3 focuses on the topics of tradition and resistance to the idea of recess prior to lunch. The tradition of recess after lunch is a barrier for some school personnel and parents. Participants also predicted possible resistance from some teachers and lunch aides.

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<th>Possible Resistance to Recess Prior to Lunch</th>
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<td>School Administrator</td>
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<tr>
<td>“Do you think there would be resistance from teachers? Changing the culture, another initiative, and the routine.”</td>
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<td>“Mine (teachers) are very willing.”</td>
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<td>“Instead of taking them (students) to the cafeteria you take them outside.”</td>
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<td>“The people to bring along are the lunch aides. So many of them are parents, too. They will make or break it. Lunch aides are key.”</td>
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<td>Parent</td>
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<td>“Our administration is absolutely on board with doing whatever is necessary to be on top of issues that benefit the children… if it is shown that it is better for children.”</td>
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<tr>
<td>Tradition</td>
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<tr>
<td>School Administrator</td>
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<td>“This is really changing a practice that has gone on a long, long time. Our grandparents went to recess after lunch. So it truly is a paradigm shift. People will think that just because we’ve always done it this way, it is the right way. You’re messing with tradition. That’s a barrier.”</td>
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<tr>
<td>Teacher</td>
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<td>“I would say scheduling overall and I have to say tradition. I’m not sure we have looked at doing it. We can’t get all of ours (children) out there before their lunch. So scheduling would definitely be a problem, but I’m not sure that anybody has looked at advantages to having it, so that would just be tradition.”</td>
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<td>“If the importance was focused on the child versus convenience of the schedule, “This is what is important for the child” versus “This is what is important for the school schedule,” that would help. That is an extremely difficult task, to convince administration to change something that has been done. The tradition is after lunch.”</td>
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<td>“It’s so non-traditional, you don’t think of it. I would like to see this once. All three of these things (eat better, waste less food, and behave better.) Two of them are definitely very important to the child. Wasting less food would be better for the world and ecology. If it makes even a little bit of difference, it is worth looking at.”</td>
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<tr>
<td>Parent</td>
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<td>“It’s always been that way. Until I was invited to join this group, I had not thought about it.”</td>
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Some school administrators were open to the idea of recess prior to lunch and their comments on student learning are presented in Table 4. For convincing school administrators who were not as open to the idea, school nutrition personnel thought that administrators would be convinced to schedule recess prior to lunch through research and awareness, observation of children in the cafeteria, student preference, and suggestion. Teachers thought that administrators would be convinced through research, observation of students' improved behavior and nutritional intake, communication of nutrition needs, and models of success. Parents thought principals could be convinced to schedule recess prior to lunch through research, awareness, and parental requests.
CONCLUSIONS AND APPLICATIONS

Results of this study provide useful information on barriers likely to be encountered when advocating for the implementation and promotion of recess prior to lunch in elementary schools. Results of this research cannot be generalized, as the purpose of the study was to explore the topic of the barriers to recess placement prior to lunch. Another limitation of the study was that there were only three school districts chosen, representing three USDA regions. The participants from Maine reported more winter weather concerns than the participants from Colorado and Kentucky. Although it is possible that results would have varied if different states in other USDA regions were used for the study, focus group research typically includes three or four groups with a particular audience (Krueger & Casey, 2000). These focus group discussions yielded consistent patterns among various groups.

Participants provided rich discussion related to convincing school administrators about recess placement, important topics to consider, and the recourse for implementing recess prior to lunch. Overall, focus group participants felt the most important topics discussed were student learning and behavior, nutrition, scheduling, hand washing, operational procedures, and timing of lunch. The most important topics for school administrators were student learning and hand washing, while school nutrition personnel focused on nutrition, hand washing, scheduling, and operational procedures. Teachers highlighted nutrition and logistical concerns and parents emphasized behavior, nutrition and learning, and timing of lunch.

These results can be used to design educational resources and training programs for school personnel and parents. The benefits of scheduling recess prior to lunch need to be explained and solutions to the barriers explored and provided. School personnel need to be made aware of successful model programs that reflect the size and other attributes of their district. The schedules for the lunch program, academic activities, and recess could be described so school administrators could draw upon them as templates to design their own plan. Sites that use peer
conflict management within the dining room could be used as demonstration projects to show improved utilization of lunch period time for behavior control rather than classroom time. Training materials and inservice videos demonstrating such programs, plans for easy hand washing, and strategies for successful playground management may be developed. Programs also need to be conducted to assist all stakeholders in understanding nutrition, the school lunch program, and the importance of students eating a complete lunch.

More research of recess prior to lunch is needed to validate these results. To convince school administrators to schedule recess prior to lunch, focus group participants recommended research studies that demonstrate that students’ readiness for afternoon classes is better when recess is scheduled prior to lunch. Financial research would be beneficial to assess the cost of supervision changes. Further studies should be conducted to ascertain the effects scheduling recess prior to lunch has on afternoon student learning in the classroom, as well as on plate waste, behavior outcomes, and supervision activities. Similarly, pre- and post- studies of schools that change from post-lunch recess to pre-lunch recess should be conducted to determine if changes in plate waste, behavior in the afternoon, supervision, costs, nutritional intake, and learning ability change. The results of this qualitative study provide useful information to school personnel, parents, and state agency personnel.

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REFERENCES


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