

Welcome. You are listening to the UC Davis Center for Poverty Research seminar series. I am the center's director, Anne Stevens. This series brings scholars and policy experts from around the country to discuss their work on poverty and poverty research. In April 2013 we hosted Sean Parker, an associate professor of educational economics at New York University Steinhart School, and the affiliated faculty of the Robert F Wagner School of Public Service.

His research focuses on several areas in the economics of education, including teacher labor markets. Here's Parker presenting his seminar, The Effect of Breakfast in the Classroom on Obesity and Academic Performance, Evidence from New York City.

>> So this is a, this is a paper on a breakfast in the classroom program in New York City that's also been implemented in a number of other school districts in the US.

And we're looking at the effects of this program on, on both obesity as well as academic performance. And it's doing work with Liz Debraggio, who is going to north western as a PhD student next. Brian Elbow who's with the medical school at NYU and, and, and the Wagner School.

And Amy Ellen Schwartz who's also at the Wagner School and Fine Arts School at NYU. So lots of, of affiliations there. This is actually part of a bigger project that it something that's pretty new for me. As the NIH funded project that involves a number of different papers.

There's the breakfast in the classroom paper, which I'll be talking about today we have a paper that's, that's under review right now that's looking at the effect of moving to universal free breakfast provision in New York City and it's impact on participation on the school breakfast program. Hopefully that will be forthcoming soon.

We have a, a third paper that's probably gonna go to a type of JAMA type journal or New England Journal of Medicine, that just sort of attempts to quantify the extent to which a neighborhood or school effects on obesity in New York City. So how much of variation, say, in obesity rates can be explained by census tracts or schools versus individual student characteristics.

And we're finding that that sort of the potential for neighborhood and school-based intervention to reduce city-wide obesity rate are pretty, are pretty limited. And so that's kind of a descriptive exercise in that, in that people. We're also conducting a survey. We're actually collecting data from schools in New York City on their own school, school food policies around serving breakfast, around physical activity, lunch, allowing competitive foods to come into the schools, that sort of thing.

It's modeled after a similar survey done by the USDA. And then once that data's in we're gonna be doing a series of kind of exploratory studies on how, with those policies are related to obesity, or pote, potentially academic outcomes and achievement or attendance, and what have you. What really underlies all of this is our access to this richly detailed fitness gram data in New York City.

And I fitness, I'll explain in a, in a few minutes. Is just an annual taking of kids. Height and weight, calculating their BMI, asking them to go through a set of routine fitness exercises, and then record all this. And, and New York City has about 1.1 million kids, and so they're collecting this longitudinally on, on basically every kid in New York City.

And so, we have that data for about five or six years. Is linkable to the achievement data. Many of you are probably familiar with the school breakfast program. It began in 1966. It's less popular I suppose than the, the lunch program even among kids that are eligible to participate in the program.

The participation rates are often much lower. For example, in New York City, about 1/3 of all students take a breakfast, every day even though it's been free for all students in the city since 2003. And many kids, three out of four kids in, in New York City are poor and eligible for, for free meals anyway.

So, the need is there but they're not taking the free breakfast that's available to. To them, a study by Frack. What the resource, research and action center, something like that, documented that New York City actually had the lowest rate

of, of lowest ratio of breakfast to lunch participation among 26 urban districts that it looked at.

So they, it seems a problem in New York City but it. It's an issue elsewhere as well. So, why so low in New York City? Is sort of a topic for a future paper. We have some ideas.

>> So, does it say anything about the five boroughs?

>> The five boroughs, yep.

So only in Manhattan, we don't look beyond. And new york does not extend beyond the bridges. So potentially part of the reason why participation is so low in the breakfast program is that breakfast is offered before school hours. And so you have to actually make an effort to get to school before school starts.

It's also served in the cafeteria so there's some stigma that comes along with that. That you have to show up and identify yourself as someone who's in need of a free breakfast, before school so that comes, comes with it's own dynamics whereas breakfast in the classroom is the main suggest, actually provides breakfast in the classroom during the first 10 or 20 minutes of school.

Sorry. And so it's, it's delivered in nearly a package like this, so there's kind of like a grab and go type mechanism where kids will come in the classroom and grab a banana, and a bagel, and a juice, and take it to their desk. And after ten or twenty minutes they'll clean up and move on.

There was something in the news, maybe it was around the holiday, on the east coast, about issues having to do with the busing, getting kids to school.

>> Hm. The bus strike?

>> A lot of controversy, and I don't think it was a strike, it was...

>> There was a bus strike.

>> I don't remember what it was. So my question, where I'm debating about that.

>> Yeah.

>> Whether it was a strike, but how many kids take the bus to school, and when do they get there, is that part of the story?

>> I'm sure it's part of the.

There at, you know, two minutes before class starts.

>> I'm sure it's part of the story. we, we haven't quantified that yet. The the nice thing about the office of SchoolFood, which provided us a lot of this data, is that they also handle the transportation. And so, they can provide us those numbers.

I think a, a much smaller fraction of kids take the bus to school in New York than what you would find in other urban districts.

>> Well that's the thing which is why I thought it was odd, whatever this

>> Yeah.

>> Issue was that I'm having trouble

>> Yeah.

yeah, they do, like for high school kids they offer subway cards or bus cards.

>> Sure.

>> And so there's free transportation but kids are often on their own to get, to get to school in a lot of parts of the city.

>> Hm.

>> So we think that's an issue.

We, we have data on school starting times and things like that and we're starting to look at heterogeneous, See our participation varies with school starting.

>> Yes, yeah. That data we don't have yet on.

>> Absolutely. An of what we see in the data too is that the school starting times are getting earlier, over time.

And in some parts of the city they've broken up large high schools into smaller units and they stagger their starting times and so some kids are starting school at 7, 7:15 in the morning. And I couldn't get there in time for breakfast. Word Josh, just a question on who determines sort of what goes into these?

>> this, the, the office of school food. They've, they've, there's very little latitude, yes. It's, it's centralized.

>> There's no

>> there, there, I'm sure there is some heterogeneity. There is a city wide menu that, that they are supposed to draw from, but there is like, with respect to the earlier question, across the five Burroughs there are some different vendors.

You know, in Manhattan, the yogurt might be organic and in the Bronx, it might, you know.

>> But they're very, you know, they're very similar. I don't think I have an example of the menu. Oh, so, in terms of like the content of what the kids are getting for breakfast, they're similar between what they would have had in the absence of breakfast in the and the BIC program.

Except that the BIC program provides mostly pre-packaged foods, and so there's nothing prepared on site. It's all something you throw into one of these insulated containers the night before. And here's I think, oh, I guess you probably can't read this, but this is a typical breakfast in a classroom menu, and so there's you know, there's things like cinnamon cream cheese bagelful, and I'm not sure what a bagelful is, but I don't wanna try it.

Seasonal fruit, you know corn bread, cheese sticks, that kind of thing, juice it's all very typical. Cereal and milk is available most every day. And then you can contrast this to the cafeteria menu which you also can't, can't make out. But these are the things that can be prepared in a cafeteria, so things like an omelet.

There is a fluffy pancake with Canadian bacon, syrup, that sort of thing. I've done a very non-scientific comparison of the nutritional content of these two. All of the, and information is online for each menu. In terms of calories, they're very similar, the thing that I noticed today is that the protein content is a little different between here versus in a classroom.

The carbs seem to be a little bit higher, in this program versus the, I think the sugar content is higher in the breakfast in the classroom, for sure. Again, that's very unscientific analysis of the menus. So this program has lots of goals. I mean, fundamentally this is about increasing participation in the breakfast program, which is low.

It eliminates the need to have to come early to school. It potentially removes the stigma of having to show up to the cafeteria to take your free meal. It's supposed to ensure all students have access to what could be considered a healthy breakfast, if you think bagel-fuls of is healthy.

Potentially eating a regular meal at the same time every day of similar size and content can help you facilitate a healthy weight rather than staggering, skipping breakfast, having a large lunch. That sort of thing. It could, it could be good for maintaining a healthy weight. Advocates of the program also arguing this provides an opportunity for teachers to say a few words about what kids are eating, and why apples are good for you or that sort of thing integrates, integrates nutrition into the curriculum.

Teachers anecdotally say that when kids are, are fed that they tend to act better in class, there's fewer trips to the nurse's office, maybe have, may improve attendance, and then cognitive performance and learning, to the extent that being fed can help, help you through out the school day.

>> One question is about the sort population I think among adults they have a stereotype in New York relatively healthy population

>> Hm. Yeah.

>> How does that play out?

>> Obesity is really high among school kids it's like 21.
>> Is that higher than, than, than.
>> It's higher than the national average and yeah.

>> Higher or lower but there also especially poor.
>> Yes.
>> These kids.
>> Right.

>> Yes. Conditional and SDS that's a really good question. That's a really good question.
>> And I guess question two there is this and that like pretty one there is in terms of locations cuz you know, presumably, when you're eating your banana, you're not you know, wiring your own neurons.

>> Yeah.
>> In a more directly academic way.
>> Yeah. So, what was that question again?
>> So there definitely a tradeoff in terms of
>> Yes, so that's also an issue. In New York City, two seconds, this is actually a big, bigger topic of conversation in New York City than you might think, of this Breakfast Classroom program.

And on the whole the teachers there are in favor of the program but if you, if you go online and look at the, the discussion in Las Angeles the teachers are totally closed to it. So the teachers union has a, yes.

>> Yes. So teachers, teachers they say they're not paid to be distributing food and it takes away from class time and it's messy, and you know.

So, the class the crowding out class time is

>> That sounds almost like the concern so much about class time like labor relations.
>> To, totally, totally they mentioned crowding out class time as a concern. Yeah.
>> Okay.

>> You may have said this earlier, was the emphasis for this program because take up rates were so low?

>> Yes.
>> Okay. Yeah.
>> And
>> Yeah.

>> And was it contentious at the time it first started or was it more

>> It, it in New York City it, it started very quietly. So this the first, the first implementation was in 2007. No one was talking about it then.

It was, they, it was, schools were were adopting this program and.

>> So for the schools it not about whether to adopt it or not?

>> Yes. Yeah, so our design is going to be looking at the same schools over time. Or similar students in the same schools over time, om, but they absolutely can choose it was not a city wide decision to adopt the this this approach.

Where as other some other districts they have done that. So it only became contentious really in the last, in the last year. And I'll tell, I'll tell you why. So there's a lot of evidence out there that having breakfast, or the quality or content of your breakfast, can actually affect your cognitive performance.

So there's randomized experiments where they'll, they'll give kids, you know, tea versus a cereal or note that skip a breakfast you know, and they'll find that kids do better on cognitive tasks when they're fed. And when they're fed something like cereal versus something like you know, just tea.

so, so.

>> Yes.

>> Yes, starving kids for the, the greater good.

>> And there are actually two studies, you know, as this, this often of, of, as often seems to happen. Two studies recently came out on the Breakfast in the Classroom program, both by economists that have found actually pretty substantial effects of this Breakfast in the Classroom program on achievement, standardized test performance.

And then the other, another paper on behavior. And I'll come back and just say a little more about those papers in a, in a few minutes. But there's been no, there's been no look at how the Breakfast in the Classroom program has affected obesity or student health more generally you know, giving you sort of the positive story as to why the Breakfast in the Classroom program might be good for kids health and their weight.

But there is also a concern that it could be bad. I mean, if, if what kids are getting with the BIC breakfast is worse than what they might consume otherwise, or as Mayor Bloomberg, who is our obesity mayor, believed that he temporarily halted the expansion of this program because he saw this as an opportunity for kids to have two breakfasts.

And there was an internal study that found that 21% of kids in these BIC schools were having two breakfasts every day, right, which is not good for, obesity and, and this was a very small sample of schools, and I've never actually seen the study. The recirculated an abstract and so I don't, I can't much about the methodology or anything of the study, but that was enough for Bloomberg to put the brakes on, on this program.

He's a relaxed a little bit in the last few months as I understand it. In part because the, Tom Vilsack, the US DA secretary came and actually spoke out in favor of breakfast in the classroom, in particular to eliminate some of the stigma associated with the school breakfast program.

And the city council is all in favor of this, and anyone that's considering running for mayor is all behind, The Breakfast in the Classroom program gives them a, an issue I guess.

>> Sub question on the cost of the program.

>> Yes.

>> Who's paying for it and is that viewed as an issue?

>> it's, I've only see analysis of the cost and I think it's kind of a wash, and if anything it might be cheaper. It's still paid for out of federal subsidies. But I think if anything, it's probably less expensive to deliver you're not paying for labor to prepare a meal in the cafeteria, you don't have to open up the school as early perhaps, so I think it's less expensive.

>> So the children that do breakfast in the classroom aren't doing hot breakfast before?

>> There's a, there's a mix, and so some schools went entirely from cafeteria to breakfast in the classroom. Some phased it in, in some grades but not in others and so they still, presumably, had a cafeteria in operation and some were exclusively cafeteria.

The move I, mean space is very limited in New York City and so there are some schools where they don't have a cafeteria and their practice before was to warm up things that were brought in and, so for them, they never really had the cafeteria operation, but big schools have, have them.

Someone asked actually in the last time I gave this talk, whether kids can have two breakfast at school if they show up to the cafeteria and somehow collected in the classroom as well. And that, that I don't know.

>> Well actually no, that would be if classes have absentees.

>> Hm.

>> Do the kids get to take two bananas?

>> Yeah. I mean, technically no. There is the subject to all the same rules about, about federal reimbursement and so the, the teachers are, are supposed to ensure that kids get. You know, you're not supposed to take less than what, you, you like a federally subsidized breakfast includes a range of things.

And so you can't just say I'll take the Bagelful today. You have to take the Bagelful, banana and the juice, before packaging. You don't have to eat it but you have to take it. And for reimbursement purposes they have to keep track of the you know, of the, how many are taken and presumably kids can have two.

But these are teachers that are administering so. Is there another? Yeah. So what we're gonna do is this very straightforward this, this program was intro, introduced in a staggered fashion throughout the city. You know, it, it wasn't done at random. These are schools that opted into the program based on their on their own decisions.

But it, it happens and slowly overtime we're gonna look at the relationship between introduction of this program and first of all meals program participation, so did it even affect kids take up of, subsidized meals. Using the fitness ground data, we'll look at effects on obesity and, and BMI.

We're also looking at the impacts on achievements on the state tests and English Language Arts and Mathematics. attendance. And then we have a student level survey where they answered questions about the school environment. So I feel welcome in this school, I feel safe in class, that sort of thing.

Just with a, with a host that may be if, if, is this program really building any community within the classroom that maybe we might be able to detect that in this survey. And we can find some small effects there.

>> Yes, yes, we have not done the cumulative yet, but we're getting there.

Yeah, it's, it's contemporary. Yep. The tree minutes word is somewhat complex, so in some schools, as you'll see the, the program was adopted school wide and so we went from a year in which the program was not offered at all to a year when everyone in school was given breakfast in a classroom.

But there other schools where it was, it was introduced at the grade level. And so fifth graders might breakfast in the classroom, but the sixth graders don't. That provides some interesting variation for us, that we'll, we can use in the next step in terms of cumulative exposure to the program.

It also muddies the water just a little bit in terms of who's actually being treated in the school, or given the offer to participate in breakfast in the classroom. We don't observe the kids eating the food. So people, nutrition experts are very concerned about waste, and they say that this is actually a very big issue that kids take meals, whether it's Breakfast in the Classroom or school lunches, and they'll take a few bites and throw it away and go to recess.

And we don't observe that. All we observe is take take, we observe take up in our participants model. Just a preview of what we find. So we find large effects of the program on participation. So participation rates in the breakfast program go way up. So it works in the sense that it actually gets more to take a, a free breakfast.

We really find little evidence if any at least no adverse impact on obesity a lot of the point estimates are negative which is consistent with this idea that this food might be better than what the kids are having otherwise. It doesn't they it doesn't point in the direction of over eating two breakfasts that sort of thing.

But most of them are statistically insignificant.

>> Are you are you thinking that in the.

>> Preservation that's close to them? Or.

>> It's average daily attendance.

>> Okay.

>> Are you going to be able to separate that out into three students

>> I'll tell you, if you'd like to know, I'll tell you why that's hard to do.

So they report it as, they report the participation by free, reduced, and full price, which is great, because that splits

them up in to income categories. But what they have is this thing called provision two which allows schools to opt in and not not keep records, basically, on kids' status and just provide free meals to everyone, lunch and breakfast.

And in those cases they lock in the counts of, they just keep those ratios the same free, reduced and full. And they, that carries forward for like four or five years and sometimes more, so, if not a real measure of participation by those groups. But, I'll say one more thing and that's that the office of school food has been really cooperative with us and they actually have point of sale data for a number of schools where kids use swipe cards and we can actually, in the future we'll have student level data on participation which will be something I've never seen before count the papers.

>> You know people would love to see something, what is the scale on calories packed into the breakfast stuff, into the food, and turn this into, like an outcomes per calories... Right.

>> It seems like you have office of magic connectors and then for the reason some do some sort of like like mobs or accounting exercises.

>> Hm.

>> Like you know or, or, or, weigh weighing exercising.

>> Mm-hm.

>> For schools to get a set about average loads. You know even if not marginal close.

>> No, that is a great idea and we do we have great relationships right now with office and school food.

I'd love to hear more about, about how you think we might do that. Yeah the nice thing about the office of school food is no one ever comes knocking on their door and so the the achievement people, the labor market you know welfare there they they have to turn people away all the time the office of school food is come on in.

>> Right

>> And one of the, one of the common findings, especially with BMI and obesity is the effects seem to vary by gender and grade level. I should say the achievement of effects go that way too. So we're not quite sure what the story is there, this might be a place for a nutritionist to weigh in.

You know boys and girls may have different calorie requirements that at different ages and so providing the same kind of meal every day may have differential effects and so I'll show you this.

>> Differential I don't sort lot of times get I'm every want Is the idea here really about calories?

Or is the idea about improving the quality?

>> I think much more of the latter. I mean when the program was initially adopted. I mean not DIC but school lunch program and school breakfast program, it was all about food insecurity and kids weren't getting fed at all. Now I think that's much less of an issue; like, we don't see many kids that were qualified as underweight, but we see lots of obesity, and so but.

>> Stuck on this two breakfast thing-

>> Mm-hm.

>> In my head, I'm thinking, yeah, maybe they eat two breakfasts but at least this way one of, you know, one story you could tell of the breakfast at home is crap.

>> Right.

>> And the breakfast at school is of course I could also measure going the other way.

>> Yes.

>> But.

>> And it varies by SES for sure.

>> I've seen the bananas specific

>> Yeah. Well one thing you know I've presented this a couple times and every time there's someone who has some much more intimate knowledge of the of these kinds of programs than I do and there's someone who worked in LA where this was being done and said that.

The kids that were really hungry would actually. They would, they would get two breakfasts and they would take or, or they, even just the one breakfast, and they would take it home. And th, it would be there dinner.

>> Hm.

>> so, you know, they might get breakfast at home.

But they didn't, they, they, you know, they were unsure about whether they would have dinner, and so they took their breakfast. You know, anecdotal, but, the, the first paper on the flips actually, and on this, look at the literature kind of speaks to that. So this paper by Botacharia, Curry and Hater, they're using end names data.

And they find that the school breakfast program didn't really alter the amount of calories that kids were consuming. At breakfast time, but there were big effects on the quality. For those participating in this survey, there were big differences in the quality of what was being consumed, when it was at school versus in home.

That's using I think, not time diaries, but meal diaries, another paper finds that, the second on on the list, finds that. So about this program, it leads to a reduction in the likelihood of eating breakfast, which, by comparing weekdays and weekends, but I'm not sure what to make of that one.

In the latter to speak to the obesity, the relationship between school meal programs and obesity, Diane Chauzenbok looked at the lunch program and found that the school program positively affects obesity because they're getting more calories with the school lunches than they would be otherwise. And this last paper by Millimet et al, finds a similar finding for the school lunch program but the opposite for the school breakfast program.

That kids that were participating in the school breakfast program had lower obesity rates controlling for sort of selection effects. So the thinking is obesity is the problem. Because you could have said it possibly affects BMI.

>> Hm.

>> And that's right, because that brings some people up from 15 to 20.

>> Hm.

>> Are you making any distinction as to the presumption. Now the low weight has been a problem.

>> Hm. We look at, we'll look at BMI too. We look at obesity, the threshold measure. And look at BMI, as well. And they're pre, they're really consistent. but, one thing that, that we would like to do is, is look more at, at different points in the distribution.

Cuz, right now what, what you're gonna see is, is basically no effect on obesity, and, and very little, to no effect on, on BMI. But it could be a wash from things that are happening at the bottom of the distribution of the competition.

>> But even if the BMI goes up.

>> Hm.

>> If you're bringing some under White kids up a little bit,

>> Yeah.

>> That's why we're here. And get some

>> Yes.

>> Like we did before.

>> Absolutely. And we, you know, overall we don't see much, a large underweight population but the, the population is pretty big.

And there's also a big population of recent immigrant kids and some of those populations are more undernourished

than others. In terms of educational outcomes, there's a number of papers that find that the meals, the school meals programs do have positive effects on outcomes, and so this Heinrich's paper from a couple of years ago find that the introduction of the school lunch program, over time, in states had large effects on educational attainment, but no real measurable effects on, on health.

And then one paper I wanna mention that's that's seems unrelated but you'll see in a second why it's related and that's the Stiglio and Mannicky paper which was really clever, that looked to see how schools school districts in Virginia were responding to test based accountability policies and so, what they found there is that schools that were sort of.

Under a threat of closure or getting sanctioned for accountability, tweaked their menus in ways that improved test performance. So on test day, for example, increasing the number of calories and increasing the content of sugar in the meals actually had measurable effects on, on achievement. So, very clever, seems hard to believe but its consistent, as you'll see, with some of the other stuff.

And I mentioned already that. Give gum to the kids

>> Gum?

>> But we get, we get no gum for a week, for the past week, we get no gum, so please remember to feed your child.

>> Yep.

>> We did, we did. We did it pretty regularly.

>> Hm.

>> I remember that like if you're just I wondering for your achievement measures if that's happening in the morning after because if it's just.

>> Yeah.

>> Eating more sugar or more like you know.

>> No no I'm saying yes could be. It could be we're we're actually not finding very not very finding very large achievement effects.

>> That could be coming down. You don't, you don't want them to be doing all this because they're kind of pumped up on

>> Absolutely, absolutely, and it's also it's a case for us to look more cumulative and longer run outcomes.

>> Okay. Okay.

>> Which we don't quite have yet.

But I wanted to say just a couple of words about the, the two existing breakfast in the class room papers. So there's two. One is by, Scott Imberman and Adriana Kugler from just last year. They're looking at the introduction of Breakfast in the Class room in a large urban district.

where, like in New York City, breakfast was provided free to all students prior to introduction of the program. So the, the treatment here was just moving breakfast into the class room at a different time. They look at impacts, the impacts on fifth grade math and reading achievement, report card grades and attendance.

The one complication or get the challenge in the design of the paper, has been roll out was very fast, and so they rolled out this program over the course of 11 weeks. And so the design was to compare kids who were exposed to the program before the test verses kids who were exposed to the program after the test.

and, you know, they, they showed that the schools didn't differ that much in terms of, of the observable characteristics and trends and that kind of thing. And found, actually, really large effects on math and reading. So about 0.1 standard deviation and even larger in some subjects. Which is a really big effect in in, in education.

So, almost unbelievable. And what, what harks back to the Figlio paper is that there was really no variation in the treatment effect with respect to the amount of time exposed to the program. So kids that, that got breakfast in the

classroom introduced two weeks before the test were seeing as large of an impact as those that had got it, you know, whatever seven, eight weeks before.

>> Have you spoke to do you know, it seems like the, this might be a sort of classic thing to look not the low BMIs but the low test scores. Like the sort of the, the, the, you know, the sort of the impact distribution.

>> Yes. This paper does that and, and finds bigger effects for kids at the, towards the bottom of the distribution.

So there's some things that, you know, there's, there's some things are, I don't necessarily quite like in this paper, but it's actually kind of consistent with the result in the second paper. From San Diego which is more in the spirit of our paver as, as a breakfast in the classroom was introduced over a period of four years.

And so, there was a staggered introduction. The, the catch with this paper is that it wasn't a universal free system before in those Provision Two schools, they offered free breakfast to everyone but in other schools, there was this tiered system of subsidies and, and paid meals. And so, breakfast in the classroom basically made breakfast free for everyone and attributed to the classroom.

So the treatment there kinda confounds both the movement into the classroom as well as a reduction of price for kids. And they find large effects, actually bigger effects on reading and math but only in schools with had not already provided free breakfast. And so its consistent with the Emberman findings, but the treatment there is in part a move to free breakfast as well as providing it in the class room.

>> What was the did they have breakfast in all of the school's cafeteria settings?

>> I believe so, yeah. I believe so, yeah. Yeah. yeah. He also had some measures of the behavior, teacher reported behavior, and found some positive impacts there on kids behavior in the classroom. And their methodology was very similar to ours it kind of different So the limitations of these paper.

You know, everything seems small when you're working with New York City data. These are relatively small samples of the schools. You know, 69 treatment and 19 control in the first and then 44 and 22 in the second. They're focused on elementary grades. One might think that the stigma might differ if you're looking at middle school vs elementary or high school.

Only the daughter paper really speaks to longer run effects vs just the within year changes. And neither of them speak to the obesity or health dimension. So our data is going to come from the New York City Department of Education and the Office of School Food. And we're pulling data together from a number of sources.

So ,at the school level we know, the schools that adopted this breakfast in the classroom program and when we know the grades that were served. If it was individual grades within a, within a school. We're assuming that one issue with the measurement here is we're assuming those haven't changed over time.

We have a snap shot in 2012. Anecdotally they tell us there weren't that many changes but there may have been some, some, some changes over time. We have average daily participation rates in breakfast and lunch over about a ten year period. And at the student level from 07 to 2011 we're as we speak our my coauthors are working with 2012 data so that will be in soon.

We have from the fitness gram height weight and these other fitness measures test scores in ELA nad math for just grades three to eight all the typical background measures you find in these kinds of data sets and then these student responses to this learning environment survey. I assume many of you are familiar with the, with the kind of achievement data that's typically using in papers so I'll just talk about fitness gram.

It's been collected annually since 05 06. But they kind of ramped it up over time so school participation was not as high in the early years as it was in later years. We're gonna restrict our analysis to school that had at least 50% of their students measured in a, in a given year.

So there's not potentially a strange population of kids within a school that are being measured. But by the end of this period, you know, we have data on almost 810,000 students in about 17,000 schools. And so there's almost complete participation then. This is the standard BMI calculation that we use, weight over height squared scaled by 7.03.

Obesity is defined as being above the 95th percentile for your gender and age. And it's based on a fixed point in time we use the CVC charts from 2000. And so that's the obesity threshold. And as our measures we're gonna use that threshold as well as the V score for BMI so the V score for your age and gender.

And as I said, nobody sees a problem in the New York City schools so 21% classify as obese and 44% are classified as overweight or obese.

>> Yes, yes and don't, I actually don't like that very much, but, we have the parameters that they use and, and the CDC charts, and so we're gonna estimate them using the national V scores.

>> Is there any variation across schools and when is administered during the school year?

>> Yes. Yes, which is not bad for us because we have the date of measurement. And so, we haven't exploited that to the extent that we could you know, there's a lot, there's even, as you said, we have contemporaneous measures of participation but, there's also variation amount of time in a given year that you can expose to that program.

And so we know the dates, but yes, there is there is variation. This is the rollout of the program. This is just the number of schools adopting it each month. Our data until a couple months from now, only runs through 2010, 2011. So, we have all of these schools in our data, but continue to be rolled out in 11 12, on a cumulative basis, this was the implementation of the program.

So the plateau, when Bloomberg decided he didn't like the program kind of

>> I'm Ann Stevens, the director for the Center for Poverty and Research at UC Davis. And I want to thank you for listening. The center is one of three federally designed poverty research centers in the United States.

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