

Welcome. You are listening to the UC Davis Center for Poverty Research Conference podcast. I'm the center's deputy director, Marianne Page. In January 2014, the center hosted the war on poverty conference. The conference featured top poverty experts from across the country discuss the US safety net on the 50-year anniversary of the war on poverty.

In this presentation, Chloe Gibbs discusses David Frisvold's paper, Nutrition and Cognitive Achievement, An Evaluation of the School Breakfast Program. Gibbs is an assistant professor of public policy and education at the University of Virginia's Batten School of Leadership and Public Policy as well as the Career School of Education.

>> Good morning, I'm Chloe Gibbs. I'm at the University of Virginia, and I wanna echo previous presenters in thanking Marianne for the invitation and Doug for sort of looping me in. And Dave, thank you for the opportunity to read this very interesting paper, I really learned a lot.

I was gonna start by motivating this conversation and serve the next few papers with child poverty rates over time from the war on poverty to today. And then Jim presented yesterday, and I promptly cut that slide. But I do think that we can use even some of the conversation that's happened this week to think about children and how children were affected by the war on poverty.

And how that might look different than other groups in particular, the elderly. So the council on economic advisers released this report on Wednesday. And I just wanted to highlight some of the language around the conclusions about how the war on poverty has effected children. So despite real progress on the war on poverty, there's more work to do.

In 2012, there were 49.7 million Americans grappling with the economic and social hardships of living below the poverty line, including 13.4 million children. And and a comment about sort of the lack of, of mobility. So only about half of low-income American's make it out of the lowest income distribution quintile.

40% of the differences in parents income are reflected in children's income as they become adults. The report goes on to talk about some of the, the successes of particular programs in the war on poverty. And their affects on children which will we'll certainly talk more about today. And in particular, focuses on not only sort of affecting kids' economic hardship at the point, at that point in time but also their, their subsequent life chances.

This sentiment was reflected in a lot of media coverage this this week too. And so how I hear that Kristof's column where progress in the war on poverty also from Wednesday where he says the best example of how government anti-poverty programs can succeed involves the elderly. In contrast, children are voiceless so they are the age group most likely to be poor today.

That's a practical and moral failure. He goes on to say, I don't want anybody to be poor, but if I have to choose I say it's more of a priority to help kids than seniors. In part, that's because when kids are deprived of opportunities, the consequences can include a lifetime of educational failure, crime, and underemployment.

And this was echoed I think in, in other media accounts of the, the progress of the war on poverty. And I think sort of we can situate this paper and the others to come in this broader conversation. So I did wanna just sort of show you what's happened around food and security.

And so this is children living in households that were food insecure at some point during the year. You see from 2002 to, to current. And what you see of course, as we all know, is this increase in food insecurity concurrent with the, with the great recession. And so how, what war on poverty programs are, are we talking about when we talk specifically about food and nutrition?

I'm gonna borrow here and gain much of my understanding about this from James' chapter in, in The Legacies book. And so the, the main food and nutrition program, some of which we've already heard about, food stamps or, or SNAP. WIC which unfortunately, we don't be hearing about, and then of course school breakfast and lunch.

And these are programs that either began under the war on poverty or were scaled up or expanded as part of the war on poverty. And I think sort of related to the, the council the council's report. There are sort of two simultaneous goals of, of these sorts of programs.

And so one is to strengthen, certainly, to strengthen the safety net for low income families, reduced poverty and hardship today. And then the other is to improve children's life chances. And I'll sort of return to those themes. So this particular paper, Dave's paper as you just saw, uses a few different identification strategies to explore the impact of the school breakfast program on student achievement or cognition.

And so he uses these diff and diff comparisons. He also uses a triple difference strategy and then of course an RD. And what he's doing here, as you saw, is explaining the variation in the state mandated thresholds for provision of the school breakfast program. And so in the D and D, he's comparing students in schools with similar percentages of disadvantaged students, but with different requirements, regarding whether they should provide the school breakfast program.

And students in schools with different percentages of disadvantaged students, but the same requirement or the same mandated threshold. In the regression discontinuity, he's comparing these students that are, are in schools right around that state mandated threshold. I find the use of these different strategies to be compelling and convincing.

And I think one thing that I would have liked to see in the paper was sort of more convincing that these thresholds are, are both sort of not tied to other thresholds of other programs that might be assigned in similar ways. Or weren't determined because of some other threshold that was already existing.

Or perhaps some and, and some more evidence that they're essential arbitrary. That they, that they were set so even some language around through how that was decided in the, in the legislation or the regulatory guidance. I think would be helpful to be, to convince me that these identification strategies are working.

I, I like the RD. And so he of course finds the binding state mandate affects in particular math and also some suggestive evidence of, of reading and science achievement. And when scaled for actually providing the school breakfast program or actually being moved by these sort of mandates, those effects, I think, are quite sizable.

I think relative to other interventions. Some specifically targeted at moving test scores. So I think it's it's particularly interesting. And I actually found myself in reading this, thinking about my own work in early childhood. So in the case of head start, where there is a nutrition component to this intervention.

How much of the test score affects the cognition effects that we see at the end of the head start year are actually maybe driven through the nutritional aspects of, of head start programming. I also have some work on full day kindergarten where I have to think the kids are staying at school longer.

They're actually getting more, they're getting a meal at school that might be over and above what half day kindergartners are getting in. And so again, how much of the cognitive results that we see from, from that type of program might actually be driven through the effects that Dave's talking about here.

I have a couple minor points I wanna make just about the paper. And then I thought I'd, and I knew they would be happy about the first bullet. He since he banned himself I think from talking about this, I felt like I can talk about this, right? So so I'll just piggy back on that.

But I was just wanna sort of knock these out and move to thinking about this paper in broader context. So one question I have was about the clustering of the standard errors, which are clustered at the state level. There were I think there was, one alternative would be to cluster them at the school level.

I think that's possible at NAEP to allow for correlation among students in the same schools. It might be trickier in the ECLS-K, as I'm not sure how many students are in the same schools by fifth grade. But the other sort of point is that I think there's a small number of clusters here.

And because not all states, as you saw on the map, not all states have these sorts of, of mandates so he's, he's really leveraging only variation within about 16 or 18 states. And so I would refer you to Cameron, Gelbach, and Miller for, for dealing with a small number of clusters.

And so, and now, what was also interesting, he talked a bit more about it today. About whether the treatment is per, perhaps introducing this measurement of food consumption. My primary concern was with parents reporting what kids are, are consuming. And that's, and the kids are actually reporting here.

But I wonder if in some cases kids are reporting consuming something that was available to them, but they might not be necessarily be actually consuming it. So they think about their breakfast and there was milk there, and so they report having had milk at breakfast. So I just wonder about that a little bit.

I guess I would sort of push less hard on the, the mechanisms piece. And then I would just wanted to make a small point about the comparability of the ECLS-K sample. So as Dave talked about, he uses fifth graders in the ECLS-K, so that they can be comparable to this fourth grade NAEP sample.

But the ECLS-K is, is nationally representative of kindergarten cohort in, in 97, 98. And there is a great deal of attrition from the sample over time, and in particular. So I'm working on some work on fade out with colle, fade out of preschool effects with colleagues at Virginia.

And what we found is that the kids who have test scores later in the ECLS-K are very different. And it, and in particular in the ways we would think, the more advantage, they're, they're less mobile. And so we might be concerned about sort of who we're getting test scores for in fifth grade and whether that really is comparable to the NAEP sample which is nationally representative.

And so then there are a lot of estimates in this paper. And they all sort of point to the effect, positive effects of school breakfast program on these outcomes. But I did wanna sort of think about how we might ex-anti parse through what we would expect from the estimates, and how they might compare to each other.

So in particular, I thought sort of before going to this endeavor, are there any reasons why we might think the estimates generated by the RD might look different from the estimates generated by the diff and diff. So in particular, do we think at certain margins this program would have more of more of an effect.

It's a, it's complicated by the fact that you're actually estimating sort of multiple lanes, because there are sort of multiple thresholds and those are then averaged into this estimate. But I just wonder if there is something to think about in terms of and I'll, I'll get to thinking about heterogeneity in terms of thinking about where in the distribution we would have expect this program to have the most effect.

So you know, I, I couldn't help but think throughout could we get at whether the effects vary by school characteristics? I know it's difficult, given the, the identification strategy and given the data. But I wonder if just descriptively, we can think about does the school breakfast program really matter in sort of more disadvantages places.

Or perhaps, what is happening is in in places where you can kind of get the few kids who need it in to have breakfast, they are less disruptive in class and sort of everybody does better. And then again are there, is there variation by student characteristics? And so you, you point out that this is a cumulative effect.

I think it'd be really interesting to be able to capture whether this has the biggest effects. I'll show my, my stripes as an early childhood person. Does this have the biggest effects if we give it to kids early and sort of at what grade? Does it ha, is, is most of this impact perhaps even being driven by sort of having it in the early years of schooling?

It would be interesting to see, to, to get at that maybe even just descriptively. And so a bit more about the mechanisms and, and outcomes. So in the paper, Dave sort of really highlights these three pathways through which we might expect effects. So that nutrition itself enhances cognition, so this sort of direct effect that it might reduce absenteeism.

There's actually some, he, he didn't talk about about it today. There's actually some interesting results on absenteeism. It sort of there's an increase in excused absences and a decrease in unexcused absences. They kind of cancel each other out, so there's no overall effect on attendance. But they, but I wonder sort of whether the program could be driving sort of this excu, you know, be, formally sending in an excuse for absence if parents are worried about sort of eligibility for the program or something like that.

And then of course, that, there's this income transfer to households. So I spent a lot of time at the University of Chicago, I can't actually give a talk. I'm contractually bound to mention non-cognitive skills all, at all times. So I, but I thought about that throughout. I mean, it seems like, thanks, that that is also potentially both a mechanism and an outcome of intensest.

So we can imagine and, and it's mentioned in the paper that if kids are better able to pay attention sort of hearkening to, to Greg's work. If kids are better able to pay attention in class, that that could, you know, translate into better test scores. Both for them and their peers, as you mentioned.

And so I wonder if you can capture that. There are behavioral measures in the ECLS-K. Where I know you have a small sample. There's, there's a neat paper working paper out of the University of Arkansas that, that looks at item response rates and coding speed. And shows that those are actually very predictive of layer educational attainment.

And so I wonder if you could maybe and it might be sort of a good proxy for conscientiousness and, and attentiveness. And so I wonder if you might be able to do something like that in the NAEP. So I think that's both interesting as, as a pathway through which these cognitive gains are realized.

But also potentially as an outcome in and of itself. And then of course, I thought about some additional outcomes so does it affect the identification for special services. I would think with these big cognitive effects, that could potentially also be happening. And then I thought throughout this paper actually sort of right when I read the title, I thought of Diane's paper on school lunch and obesity.

And so I'm sort of wondering if we're facing any trade-offs here between sort of the cognitive gains and then potentially also increasing obesity through these school-provided meals. And so you can see over time up among age groups the youngest is the blue bar, ages two to five. The green bar, six to eleven.

And the purple bar, 12 to 19. You can see, and we all know that increasing obesity rates among kids. And so I wonder if you could capture in this data. So using the same strategies, identification strategies, using the same data get at whats happening with obesity, to see if we're sort of facing those, those kinds of unintended consequences, as I mentioned.

So what are the intended outcomes of this program? I think you know, it's interesting to think about its effect on, on this question, right? So food and security at the time, hunger at the particular time. But I think we're also interested in these in these longer term effects and and certainly these types of gains on test scores seem important for, for kids' long-term prospects.

And so, I, I'd be interested in sort of situating these in the broader literature. How do these effects compare to investing in health and nutrition in other ways for kids? And I think it's particularly important to think about the cost-effectiveness. The impact of other education interventions. As I mentioned, we don't see effect sizes like this from a lot of of education interventions that are intended to affect test scores.

So I think it would be helpful to sort of situate this in the, in the broader literature. And can we think about estimates from, from Cheddy, and and from other places that might help us think about how these test scores impacts my actually translate into improved later life outcomes.

And that's related to thinking about implications for policies. So I, I wonder if there's something special about nutrition interventions in school. I mean, certainly, you have a cap, essentially a captive audience and so you can control perhaps in ways you can in in other programs. But also this point about pure effects, I think is really interesting.

So is it the case that if you sort of mitigate some of the negative effects of, of kids being hungry in the classroom that there are sort of gains for everyone. Which might make a nutrition intervention at school particularly important. And, and so then, and what are the implications for thinking about targeting?

So this program sort of has two layers of targeting. Targeting to schools that are disadvantaged, and then within those school subsidizing the students that are disadvantaged. And so I wonder if there are ways we can think about about that targeting from the, from the results of this paper and the sort of growing body of literature around school meals.

And of course, you know, if we're targeting younger kids, if we got kids sooner with these types of interventions, would that be more meaningful? I'm interested in the relative return to investing in a school breakfast program versus investing in a school lunch program. Is there something different about breakfast in terms of how it translates into cognitive outcomes?

And how that might think, help us think more broadly about the cost effectiveness of these programs. Sort of borrowing from Maya's point yesterday, how do we think about all these programs packaged together and how they're working together. Are they are there complementarities there? Or should we think about comparing the relative cost effectiveness of these different ways of investing in kids?

Thank you.

>> I'm Ann Stevens, the director of the Center for Poverty Research at UC Davis, and I want to thank you for listening. The center is one of three federally designated poverty research centers in the United States. Our mission is to facilitate non-partisan academic research on domestic poverty, to disseminate this research, and to train the next generation of poverty scholars.

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