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Poverty Research and Policy Podcast

Heather Hill on Why Disruptions in Income Might Matter for Child Development

August 2018 podcast episode transcript

Featuring Heather Hill, Associate Professor, Evans School of Public Policy and Governance, University of Washington

Hosted by Dave Chancellor

Chancellor Hello and thanks for joining us for the Poverty Research and Policy Podcast from the Institute for Research on Poverty at the University of Wisconsin-Madison. I'm Dave Chancellor. This is our August 2018 episode and we're going to be hearing from Heather Hill about why changes or disruptions in income might matter for children's development. Hill is an Associate Professor at the Evans School of Public Policy and Governance at the University of Washington. I was fortunate to have the opportunity interview her when she visited us at IRP this spring to talk about her study on income dynamics and children's cognitive and social and emotional outcomes — and we'll talk about that study in the second half of this episode — but first I asked her to tell us about what income dynamics means and how researchers measure it.

Hill There's literally decades and decades of research on how income matters to children and it has some very clear results about income being beneficial to children in a variety of different ways and in a variety of domains of their life. But we tend to think about income in these studies, we tend to think about income using what I talk about as static measures – that is, we're really not trying to understand fully how much income changes over a month or a year or a childhood, but rather just trying to capture what's a good measure of the income that a family has to spend on providing food and housing and schooling to their kids. Are they in a given point in time facing material hardships, things like not being able to pay for utilities or phone or things like that. So, the dynamic part of the title is calling attention to the fact that I'm going to try to measure income over time during childhood and not just understand the kind of average level of income but also how much variability in income that family experiences and also what the trend in income is, that is, are they generally seeing an improvement over time in income or a decline or sort of staying stable?

Chancellor Hill clarifies that there are a number of terms that scholars use to discuss these shifts in income.

Hill There's a lot of studies now like my own that are using the term variability or volatility to mean the same thing which is just how much change in income — and it could be something other than income too — how much change in your employment status or how much change in your housing are you having around some sense of the average, right? There's also this term that's being used more and more in the social sciences and somewhat in policy, which is instability. And some people use that term in the same way that I would use variability or volatility. But with some colleagues, we've tried to define instability a little bit more specifically to think about instability as the types of variability that are most likely to be disruptive to families and children. And so the way we've thought about that is that variability that is not intentional, that's not predictable, variability that's not part of some upward trend in mobility. These are the types of variability that we would argue are most likely to be disruptive and most likely to matter to both the resources that a family has but also the stress that the parents are feeling.

Chancellor Hill says that there are a couple of main pathways for how researchers think that drops in income matter for kids — money and stress.

Hill We have, as I mentioned, decades of research and theory on why income matters to children and we generally think it matters both through the things that parents can buy for their children including basic needs like food and housing but also their ability to purchase high quality child care, schooling, etc. But we also think income matters to children through its effects on parents' stress. And in particular, that having insufficient income or large drops in income has been shown to increase parental stress and parental stress has been connected to less positive parenting behaviors, what we call harsh parenting. And that harsh parenting has then been associated with children's behavior problems. So these are sort of these two different — what we call the investment pathway, which is basically the money parents can spend on kids and then we have what we call the stress pathway. And there are some studies that suggest that the money pathway is most likely to affect children's cognitive outcomes because it has to do with how many books you can have in your house and whether they're going to a high quality school and things that are likely to be very directly related to school achievement and cognition. Whereas some studies have suggested that the stress pathway is most likely to then be related to children's behavior because it seems like there's such a strong link between parenting practices and behavior.

Chancellor But Hill says that income variability by itself — not just through parental stress or reduced income — but that the actual instability may matter for children's development.

Hill We're still at the early stages of really thinking through how variability might matter. But what we do know is that there's multiple concepts in developmental psychology that focus on stability as an important component of children's development and that highlight the risks of constant change. And so this comes from, as I mentioned, a number of different concepts and different theoretical frameworks but the idea that our bodies and our minds are very capable of adapting to change but there is evidence that at some point change can be so frequent or so constant that we get kind of stuck in a space of responding to stress, responding to change. And that stuck place has real physiological consequences that are potentially lifelong. The notion is that if constant change is potentially problematic for families and for children then we need to understand how much income variability there is and whether it affects children and children's development.

Chancellor Hill emphasizes that trying to understand how income volatility matters for child development isn't just something she's talking about in the abstract — but that economists have shown that since the 1970s there have been large increases in income variability for households in the U.S.

Hill This is actually happening that families experience much more variability in income both year to year and month to month than they did previously. And what we see when look at these analyses of trends is that income variability has increased across the income distribution for both low income families and high income families and everyone in between. But the income variability is always higher for the lowest income families and that they've experienced the largest increases over time. So we're actually seeing a gap that's growing. We talk a lot about income inequality, the gap between the highest and the lowest incomes. This is a different type of gap — where we're seeing much higher volatility or variability in income for the lowest income families than we see for the highest. So then we worry about variability might not be that detrimental or that disruptive when families have other resources they can draw on. Savings or family members who can help them out, but we worry that variability experienced by low income families could be particularly problematic because they're unlikely to have savings or assets. They're less likely to have families who can provide a loan or help out in a given month. So that's the sort of combination of low income and variability is really where we might be most concerned.

Chancellor I asked Professor Hill about what might be driving increases in income instability and she says we don't have conclusive evidence, but that do have some good hints about likely culprits.

Hill We know that there's quite a bit of movement between jobs in low wage employment, spells of unemployment, what we call between job instability. But in addition to that, there's quite a bit of evidence recently by Susan Lambert and Julie Henly and others that there's quite a bit of what we call within job instability. So this is instability — you have a job. The job is stable in terms of your employment but you

Hill, continued have such fluctuations in your hours or your schedules that you actually don't know week to week and month to month what your hours will add up to and what your earnings will be. Susan Lambert and Julie Henly have done a wonderful job of talking about how that type of uncertainty might affect both individual workers and also family life. One of the key ways that it's likely to affect things is by creating really unstable earnings and income. So that's a major driver. Also very important is the fact that family structure and composition has become less stable over time and is particularly less stable at the low end of the income distribution. So you have a higher rates of cohabitation but also relationship dissolution. Either divorce or the end of a cohabiting relationship. You also have at the low end of the income distribution, often multigenerational families living together, which can be an incredible source of support, but if there's changes in those arrangements, if a grandmother moves in or out or if a separated parent moves back in for a period of time for financial reasons or something like that, those are potentially creating income instability as well, income variability, because that's how many adults you have in the home earning.

Chancellor Hill says that besides work and family changes, a third area we need to understand is the role that the safety net plays here.

Hill Income support programs, programs like food stamps and the Earned Income Tax Credit, over time more and more of those supports have been tied directly to employment. And actually there's discussion currently of tying them even more directly, tying some of the programs that are still separate from employment. There's discussion now of creating work requirements and things like that. So, as employment became less stable, we also tied income supports, the safety net more closely to employment. And so the safety net is more likely to fluctuate with work than it was before, so Bradley Hardy has done a nice study where he shows that over time what used to be called transfer income, the income that families get from these income support programs, was always a smoothing factor. It was something that helped to smooth other fluctuations in income, but that since the 1980s that effect has decreased quite a bit. So, we think that it's both work being unstable and family structure and composition being less stable, but also that we don't have as many safety net programs that are designed to help families stabilize when other things are less stable. And so in that context, we then worry — I worry at least — about tying additional income support programs directly to work knowing that one of the results has been to make income less stable.

Chancellor Given these concerns over growing income instability, I asked Professor Hill to tell us about her study and what it is that she's looking at when it comes to income volatility and how it may matter for child development.

Hill It's a study of how income matters to children's development and how it matters to their wellbeing in a couple of specific areas — cognition, which is often measured by academic test score type measures and then social and emotional development has to do with how they interact with others, how well they're able to maintain attention and stay focused and act appropriately in different settings. And so, those are measured often in studies like this with behavior measures which are in this case and often, parent reports, and in other cases you sometimes will get teacher reports of how children are behaving. And we capture both acting out type behavior issues in those measures, but also what's called internalizing, which is just a fancy word for children who are becoming withdrawn or anxious or depressed and that's sort of a different type of behavior problem.

Chancellor In the study, a first question she asks is how income variability relates to these child outcomes after controlling for income.

Hill So another way of thinking about that is if we take two families that have the same income level but one has very high variability and one has very low, do we see any difference for kids in those two families in their outcomes, sort of controlling their income level and really understanding income variability. The second question was a question about whether the relationships between income variability and children's outcomes might differ by the overall income level of a family, the family's wealth, Hill, continued — and the child's age. So, I'll say a little bit about each one of those. The first two, looking at income level and family wealth are ways to test the hypothesis that variability might matter less if a family has resources they can draw on to smooth consumption, to not have that fluctuation in their income really show up in the way that they're investing in their children and maybe for those fluctuations in income to not be as stressful because they know they have savings. Looking at whether the effects vary by income level and wealth are both about sort of understanding whether that's true that having some additional income or savings could help you to buffer these effects. The third moderator, child age, really comes out of the vast literature on income and children, which suggests that the effects of income level on children on are much larger for young children. So that is that the implications of family income for child development are largest when kids are youngest.

Chancellor — To answer these questions, Hill uses the Panel Study of Income Dynamics or PSID — and specifically the child development supplement of the PSID.

Hill — So I'm taking advantage of the PSID as one of the best data sources for getting complete and accurate income information. It's not perfect income information but in terms of the surveys we have available to us, it's one of the best. It's a nationally representative sample of households and so when we examine these types of relationships using the PSID, we're really able to talk about the effects as being generalizable to the national population. So it's a great resource and dataset. The child development supplement, however, is relatively small in terms of the number of children that are involved. It started out with about 1500 children ages 3 to 14 and they followed those children for three waves with about five years between each one. And so what that means is that when I try to look at some of these differences between groups that I was interested in, between the high and low income families between those with wealth and no wealth, it gets a little bit difficult to be able to understand whether differences exist because the sample size just gets smaller. In addition, this is not a study that would allow me to speak about the causal effects of income variability, so one of the limitations of the study is just that it's really, I'm really estimating relationships, associations between these things and not claiming to have isolated the causal effect of income variability.

Chancellor — And what Professor Hill finds is that, among the full sample, income variability is associated with decreased math and reading scores but not with problem behavior or positive behavior.

Hill — The effects of income variability however, are quite small and what's particularly noticeable is that they are small relative to effects of income level. So in these models, I'm including an average income measure to capture just the level of income that the family has on average across five years. All of the measures I'm using are five year measures so I have income level and then I have a measure of how much income varied in those five years. And what we see is that — and this is somewhat expected I think— that income level has much larger associations with the cognitive outcomes but also with some of the behavior outcomes then does the variability measure.

Chancellor — Hill says that perhaps it's not the amount of variability overall that someone experiences, because some of that variability might be positive or some of the changes might be relatively small. Instead, there's a possibility that the size and number of large shifts in income might be more important.

Hill — There might be threshold effects where at a certain level of change, it's simply too much and that's where you start to see adverse effects. I test that in the model using a measure of large income changes defined as a change year to year of 25% or more. Some of the families have none of those changes in the five years, some of them have one or two and some have three or more. And, what I find in those models is that three or more threshold is really one where you start to see negative associations between that high level of variability and test scores. That suggests that some amount of variability is actually not that disruptive but that at some point it pushes over a level and is.

Chancellor These findings were for the full sample — so families from across the income distribution, but she also wanted to see how things might look different for families with low income versus families with higher income.

Hill And so I looked at the families that were in the bottom quartile of the income distribution, so that's roughly $30,000 a year so it's not too far off from a poverty measure without any adjustments for family size or anything. So I split out the sample looking at the families that were in the bottom quartile and then all other families and when I do that, you see interesting patterns in terms of this relationship between variability and the outcomes. For cognitive test scores, you see a relationship between variability and the test scores, that negative relationship I was mentioning, the higher the variability is, the lower the test scores. You only see that from middle and upper income families. You do not see it for the bottom quartile. Then when you look at the behavior outcomes, which are not — I did not actually find statistically significant associations for the full sample for the behavior outcomes. But when you look at those by income level, you see much steeper relationships for the bottom quartile. So that is variability is actually associated with higher problem behavior and lower positive social behavior, but far more so for the bottom quartile, for the lowest income families than for the middle and upper.

Chancellor Hill is quick to point out that this evidence is very preliminary, but she says it's interesting because it suggests that there may be differences in the effects of variability, not only on different types of outcomes for kids, but on different types of outcomes at different points in the income distribution.

Hill And I don't have an explanation for this difference yet, except for that you might imagine if it's a stress pathway for the behavior outcomes, that the variability for lower income families is far more stressful and you're more likely to see the effects then on behavior for those children whereas for middle and higher income families, it may be that the effects of variability on cognitive test scores have more to do with something about schooling or choices about activities after school, I don't really know. So that would be sort of a set of next steps for thinking through how this might play out differently in low and high income families.

Chancellor Professor Hill says that when we're thinking about this issue of income variability from a policy and practice perspective, one question it should raise is whether our income support programs and social services more generally are operating under the right assumptions about income.

Hill So, just as a simple example, many programs are using earnings or income to determine whether you're eligible to participate and the assumption is that if your income goes above the eligibility level, that you must be on an upward trajectory towards what some people would refer to as self-sufficiency or not needing these programs. But when you look at the amount of variability that low income families are facing in income or in a variety of economic circumstances, you can really envision that they're going above and below those eligibility limits quite frequently and that when you see someone go above them it's not about a necessarily, a permanent long-term improvement in their circumstances. So I think that relates to so many different programs and services that are offered and it's really a challenge administratively for the programs that are trying to provide services to low-income families. I would also say that from a research perspective that I think there's still a tremendous amount for us to understand about the contexts in which variability might be disruptive or not for families. And that can include everything from getting a better handle on when is income variability predictable and when can families plan around changes and not have those changes be as consequential. Also questions like "is income variability being caused by work or changes in family composition and does that change the effects then of the variability? Is it different to have variability that's caused by a job versus variability that's caused by people moving in and out of the house." There's very good reasons to think those might differ, we just really haven't investigated that yet.

Chancellor Thanks to Heather Hill for taking the time to share her work with us. To learn more, you can look for the many articles she's written on the topic, including 2017's "An Introduction to Household Economic Instability and Social Policy," in Social Service Review, with Jennie Romich, Marybeth Mattingly, Shomon Shamsuddin, and Hilary Wething.

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