The Hechinger Report

EARLY EDUCATION

Behind the findings of the Tennessee pre-K study that found negative effects for graduates

Low funding, poor quality and a lack of support in elementary schools could be leading to poor outcomes after pre-K

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While the Tennessee pre-K study shows how important it is for early ed programs to evaluate their outcomes, some experts caution against using the study to draw conclusions about public pre-K nationwide. Credit: Jackie Mader/The Hechinger Report

udging from the emails, calls and tweets I've received in the last week, there are few early education studies with more hated results than the

J multi-year study from Vanderbilt University researchers, which tracks outcomes for children who attended Tennessee's voluntary pre-K program more than a decade ago.

The first part of the study, released in 2015, showed slightly negative effects on the academic performance of pre-K graduates by the end of third grade. The findings from the study's second part — released earlier this month — **were just as dismal**.

The latest release, which followed students who started at the state-run pre-K program in the 2009-10 or 2010-11 school year through the end of sixth grade, found that grads of the program had lower academic scores, more behavioral problems and more special education referrals than their peers who did not attend.

(In the years since the children attended, the state has taken **measures to improve programs**. These efforts include **awarding funding based on quality** and **partnering with external evaluators to observe and measure the quality of teacher-student interactions**.)

Researcher Dale Farran told me the results of the most recent study are "alarming." They suggest to her that the pre-K programs these children were attending were "not good for them, long-term."

But, while the Tennessee study shows how important it is for early ed programs to evaluate their outcomes, one leading early childhood expert cautioned against using the study to draw conclusions about public pre-K nationwide. "To me, the two key points are the uncertainty about why this is happening in Tennessee, and the inappropriateness of generalizing this to any place outside of Tennessee," said Steve Barnett, director of the National Institute for Early Education Research.

Research shows there are many pre-K programs that are **good for kids** in the short- and **long-term**. A recent study of Georgia's pre-K program, for example, found students who attended the state's program **had higher**

math scores eight years later. In San Antonio, researchers found students who attended the city's pre-K program **were less likely to be assigned to special education**. Graduates also scored above the state average on the third-grade math exam.

So what happened in Tennessee?

Two related factors could be funding and quality. While some pre-K programs with **positive effects**, like New Jersey's, spend **almost $15,000** per child, Tennessee spent **$4,524** per child in 2009, an amount has **inched up** by about $900 in over a decade, when adjusted for inflation. That can have a direct impact on the quality of programs.

As those who work in early childhood know, dozens of factors in and out of classrooms can impact children's outcomes in school, their interpersonal relationships and their success later in life. A year or two of pre-K is not necessarily an inoculation against everything children may encounter during their school careers. The Tennessee researchers acknowledged this uncertainty.

They suggested several possible reasons for their findings, such as issues with the specific literacy and math skills that are (or are not) taught in the state's programs, failure of programs to develop working memory and attention skills in children and possibly even the general experience of attending center-based care.

On the latter issue, researchers wrote that the negative behavioral results they found are similar to findings from other studies showing behavior challenges among children who experience group or formal care at a young age. (As a parent whose two children started group care in infancy, I found this part of the study especially hard to read.)

In addition to funding and quality concerns, Barnett pointed to a host of potential factors that could also affect the Tennessee results: Maybe kids and their parents aren't as motivated, for some reason, after going

through the pre-K program. Maybe they develop a distaste for school. Perhaps there is some type of interaction between the K-12 system and the preschool program that just isn't working to support children once they get into early elementary school.

"I think it's not logical to attribute the outcomes to the preschool program alone, as opposed to some kind of interaction between preschool and K-12," he said. A **2018 report** published by New America, a progressive think tank, came to a similar conclusion. "Without reforms to the early elementary grades that follow pre-K, it is unrealistic to expect students to maintain the advantages they gained as a result of their pre-K experience," the authors wrote.

What's up with the quality of Tennessee's program?

The **quality** of Tennessee's program has **fluctuated**, as measured by a pre-K rating system designed by Barnett's institute. The system, which looks at elements like teacher qualifications, early learning standards and class size, sets "minimum standards" for quality. But, Barnett said, quality on paper is different than in practice.

"If you don't meet these, you most certainly are not good," he said. "And many states that meet them go beyond them."

Some quality issues in Tennessee classrooms have been pointed out in the past by Farran and other early ed researchers. A **2014 study**, for which Farran was a principal investigator, found that when classrooms across the state were evaluated using a widely accepted early ed research tool, there was "great variation" in their quality scores. The vast majority, 85 percent of the classrooms studied, scored below the level of "good" quality.

Lisa Coons, chief academic officer for the Tennessee Department of Education, said the state's current pre-K program is of higher quality than it was in the years studied by the Vanderbilt researchers. Tennessee has

focused on improving its pre-K classrooms since 2016, when state lawmakers passed legislation specifically aimed at pre-K quality, she said.

The state is also participating in a Harvard University research study looking at how to align the pre-K and K-3 systems so children who qualify for public pre-K are both supported and have better transitions into elementary school. “I think it’s really important for us to look at what happened with the children in the original study and understand what interventions continued after pre-K, and really use that as a case study of what occurred with those children,” Coons said. “But I don’t think it’s a current study of what is actually happening in practice with our current pre-K program.”

What did Tennessee classrooms look like?

The 2014 study mentioned above gives some hints about the issues that affected the state-run program: Across the Tennessee pre-K classrooms that were observed, teachers spent too much time on transitions and whole group instruction. When content was taught, it was almost entirely focused on literacy. There was little to no infrastructure for supporting teachers or overseeing what was happening in classrooms. The amount of time children spent in center time was often less than what researchers consider necessary to meet a “minimal” quality standard. (A 2017 study found appropriate use of some of these practices can make a **classroom excellent instead of mediocre**.)

During our conversation, Farran said she worries pre-K overall has become too academic, especially when it is enveloped by the school system, and children don’t get enough time to play, share their thoughts and observations, and engage in meaningful, responsive interactions with caregivers. If pre-K classrooms are going to be in elementary schools, they need to be appropriately-designed for 4-year-olds, Farran added, which includes having bathrooms attached to the classroom, an appropriate playground, ample time outside and meals served in the classroom.

Coons said classrooms now look different. “We have a much better sense of what’s happening in the [pre-K] program since 2018,” she said. More observations of classrooms and opportunities to give feedback to teachers have also “created a significant shift over the past several years in the quality opportunities in those classrooms,” she added, and observers have seen quality scores increase in classrooms statewide.

Should parents worry about the quality of their state-funded pre-K program?

Elliot Haspel, an author and program officer for education policy and research at the Robins Foundation, which focuses on early childhood education, said it’s important to put the Tennessee study in context. “From a research perspective, this is one study, and there are others of the same design that say exactly the opposite,” he said. Even if parents are in a state where the pre-K program is deemed low quality, Haspel said classrooms could still be high quality.

“There’s a difference between your state’s pre-K program and your child’s pre-K program,” he said. “The real question to ask is what’s happening in your kid’s classroom. Do they look forward to going? Does the teacher seem like they’re warm and attentive and responsive?”

Barnett cautioned — again — against applying this study to other programs, given the variety of factors that can play a role in child outcomes, but he did say it points to the importance of quality in group care and education. “If kids have consistently high quality, they do better and there aren’t negative impacts. If the quality’s not there, then they can do worse. And in particular, if you have long hours of inadequate quality, that’s really, really not good.”

As it stands now though, if kids are in a low-quality program, many parents don’t have the option of keeping their children home — or even of moving them to a different child care or pre-K setting.

Parents need to have options, Haspel said, whether the option is child care, pre-K or a mix of both, "that meet their needs and preferences."

What now?

Pre-K research is complicated, controversial and divisive. While some pre-K advocates may be quick to toss aside this specific study, the stakes are high: Pre-K programs serve young kids at a pivotal time in brain development. Farran encouraged officials from other pre-K programs to engage in similar, long-term research.

Haspel agreed that the study shouldn't be dismissed just "because we don't like the answer."

Instead, he said, researchers and experts should dig into some of the possible reasons that have been suggested for these outcomes. "It's a good reminder that there are ongoing research questions and that we should use those and go through the scientific method, and use that to improve the program for all kids," he said.

Editor's note: This story led off this week's Early Childhood newsletter, which is delivered free to subscribers' inboxes every other Wednesday with trends and top stories about early learning. ***Subscribe today!***

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