Boys are falling behind. They graduate from high school and attend college at lower rates than girls and are more likely to get in trouble, which can hurt them when they enter the job market. This gender gap exists across the United States, but it is far bigger for poor people and for black people. As society becomes more unequal, it seems, it hurts boys more.

New research from social scientists offers one explanation: Boys are more sensitive than girls to disadvantage. Any disadvantage, like growing up in poverty, in a bad neighborhood or without a father, takes more of a toll on boys than on their sisters. That realization could be a starting point for educators, parents and policy makers who are trying to figure out how to help boys — particularly those from black, Latino and immigrant families.

“It’s something about family disadvantage itself,” said David Figlio, a Northwestern University economist and co-author of a new paper, presented publicly for the first time on Thursday. “Black people in America are more
disadvantaged than white people in America, and if we were to reduce the disadvantage, we may see a reduction in the relative gender gap as well.”

Marianne Bertrand, an economist at University of Chicago who with Jessica Pan has studied the gender gap, also found that boys fare worse than girls in disadvantaged homes, and are more responsive than girls to parental time and resources. “Their findings were very consistent: Families that invest more in children are protective for boys,” she said.

The reasons that boys react more negatively to disadvantage are varied and hard to pinpoint. Even in utero, boys are more sensitive to extreme stress than girls, and tend to have more unruly temperaments. Society discourages boys from showing vulnerability. Low-income families are often led by single mothers, which has been found to affect boys differently than girls.

By the time boys from poor neighborhoods start kindergarten, they are already less prepared than their sisters. The gap keeps widening: They are more likely to be suspended, skip school, perform poorly on standardized tests, drop out of high school, commit crimes as juveniles and have behavioral or learning disabilities.

Boys tend to have more discipline problems than girls over all. But the difference is much bigger for black and Latino children — and more than half of the difference is because of poverty and related problems, the researchers found. For instance, while boys in well-off families have almost the same test scores as their sisters, the gap is more than three times as large in the most disadvantaged families, the study found. While well-off boys are 3.1 percentage points less likely than their sisters to be ready for kindergarten, the most disadvantaged boys are 8.5 percentage points less likely.

The pattern is clear at Astor School, a kindergarten through eighth grade public school in a low-income part of Portland, Ore. More than half the students are economically disadvantaged, and nearly half are minorities.

Girls generally enter kindergarten with skills suited to doing well in school,
like sitting still and using a pencil, while many boys act younger, having trouble listening to adults and controlling their impulses, said Jeff Knoblich, the school counselor.

“Boys get a message from a very young age to be a man, and to be a man means you’re strong and you don’t cry and you don’t show your emotions,” he said. “I see boys suffering because of that, and a lot of that comes out in aggressive behaviors.”

Problems in elementary school have long-term effects. Early suspensions are strongly correlated with not graduating from high school. The modern economy relies on skills like cooperation, empathy and resilience — and many boys are entering the work force poorly equipped to compete.

The researchers — who also included David Autor and Melanie Wasserman of M.I.T., Krzysztof Karbownik of Northwestern and Jeffrey Roth of the University of Florida — examined various reasons boys could be falling behind. By analyzing brothers and sisters in about 150,000 households using databases from the health and education departments in Florida, they could control for differences in families.

They concluded that boys aren’t born this way. Babies of low-income mothers are less healthy, but the boys are not worse off than the girls.

Though disadvantaged children are more likely to be in underperforming schools or neighborhoods with drugs and violence, this alone does not explain the gender gap, the researchers said. Even in the same neighborhood and schools and for children of the same race, the gender gap is wider in less-advantaged families.

“Boys particularly seem to benefit more from being in a married household or committed household — with the time, attention and income that brings,” Mr. Autor said.

The researchers compared families based on whether the parents were single or coupled, and also looked at the education level of the mother, the income of the
neighborhood and the quality of the school. They said they could not isolate which variable mattered most, probably because they are all intertwined.

But they said there were clues to why boys are extra sensitive to disadvantage. A big one is that impoverished households are more likely to be led by single mothers, and boys suffer from a lack of male role models.

“It’s quite possible that daughters are drawing the lesson that I’m going be the sole provider and the head of the family and take care of everything,” Mr. Autor said. “Sons could be drawing the lesson that the men I see around me are not working or committed fathers. They’re doing other stuff.”

Mothers, especially single mothers, tend to spend more time with daughters than sons. Boys, meanwhile, might need more oversight and discipline than girls to learn things like controlling their emotions and focusing on school.

“The model in my mind, even though it’s not proven, is maybe boys are more likely to be subject to behavioral problems, maybe they’re born like that, and you can with parental investment and more resources fight those problems,” Ms. Bertrand said.

Lucy Armendariz, a single mother of four whose children attend Astor School, said her sons have deeply felt the lack of a male role model.

Her oldest son, Kenny, 14, has received poor grades and skipped school often, though she said he is improving. Her two daughters, 12-year-old JoAnna and 8-year-old Selena, have each been on the honor roll and enjoy school.

“For him, he wasn’t able to have a positive male role model for years,” she said. “My girls, they’ve had me.”

Her younger son, Tiger, 4, can read a few words and will enter kindergarten next fall, but she said she can tell he is not as prepared as her daughters were at the same age. He seems to be doing better now that his father is more involved, she said.
For policy makers, Mr. Figlio said, the study’s results show disadvantage should be taken into account when devising ways to help boys, and gender should be considered when helping poor children, since boys and girls seem to respond differently.

For educators, research points to the importance for boys of early interventions, like high-quality preschool and mentoring.

For parents, the data show the payoffs of spending more time with children, especially boys, Ms. Bertrand said. For single parents, supporting their families on one income, that might be easier said than done.

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