

Breast-feeding benefits appear to be overstated, according to study of siblings

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A new study comparing siblings who were fed differently during infancy suggests that breast-feeding might be no more beneficial than bottle-feeding for 10 of 11 long-term health and well-being outcomes in children age 4 to 14.

The outlier was asthma, which was associated more with breast-feeding than with bottle-feeding.

The study also included an analysis of outcomes across families of different races and [socioeconomic circumstances](#) for comparison purposes, and those results matched other studies suggesting that breast-feeding's benefits to children outweigh bottle-feeding.

The lead researcher noted that there is a clear reason for that.

"Many previous studies suffer from selection bias. They either do not or cannot statistically control for factors such as race, age, family income, mother's employment – things we know that can affect both breast-feeding and health outcomes," said Cynthia Colen, assistant professor of sociology at The Ohio State University and lead author of the study.

"Moms with more resources, with higher levels of education and higher levels of income, and more flexibility in their daily schedules are more likely to breast-feed their children and do so for longer periods of time."

Previous research has identified clear patterns of racial and [socioeconomic disparities](#) between women who breast-feed and those

who don't, complicating an already demanding choice for women who work outside the home at jobs with little flexibility and limited maternity leave.

Colen's study is also rare for its look at health and education benefits of infant feeding practices for children age 4 to 14 years, beyond the more typical investigation of breast-feeding's effects on infants and toddlers.

Federal health officials have declared breast-feeding for at least six months a national priority, which could end up stigmatizing women who can't opt to nurse their babies, Colen said.

"I'm not saying breast-feeding is not beneficial, especially for boosting nutrition and immunity in newborns," Colen said. "But if we really want to improve maternal and child health in this country, let's also focus on things that can really do that in the long term – like subsidized day care, better maternity leave policies and more employment opportunities for low-income mothers that pay a living wage, for example."

The study is published in the journal *Social Science & Medicine*.

Demographic differences across families that can bias studies in favor of breast-feeding include parental race, age, marital status, family income, insurance coverage, the mother's education and employment, and whether a woman smokes or drinks during pregnancy.

"When we get more advantaged moms selecting into breast-feeding and we know those traits also will affect the [health outcomes](#), it's not clear what's affecting an outcome like obesity – is it breast-feeding itself or those other background characteristics?" Colen said.

Colen used data from the 1979 cohort of the National Longitudinal Survey of Youth (NLSY), a nationally representative sample of young

men and women who were between ages 14 and 22 in 1979, as well as results from NLSY surveys between 1986 and 2010 of children born to women in the 1979 cohort. The children were between ages 4 and 14 during the time period studied.

The NLSY79 is conducted by Ohio State's Center for Human Resource Research for the U.S. Bureau of Labor Statistics.

Colen analyzed three samples: 8,237 children, 7,319 siblings and 1,773 "discordant" sibling pairs, or children from 665 surveyed families in which at least one child was breast-fed and at least one other child was bottle-fed. The children who were differently fed in the same family represented about 25 percent of the siblings in the data.

For each sample, the researchers sought answers to two basic questions: Was at least one child breast-fed and, if so, what was the duration of breast-feeding?

The study measured 11 outcomes that are common to other studies of breast-feeding's effects: body mass index (BMI), obesity, asthma, hyperactivity, parental attachment (secure emotional relationships between parents and child) and behavior compliance, as well as scores predicting academic achievement in vocabulary, reading recognition, math ability, intelligence and scholastic competence. Colen constructed statistical models for the analysis.

As expected, the analyses of the samples of adults and their children across families suggested that breast-feeding resulted in better outcomes than bottle-feeding in a number of measures: BMI, hyperactivity, math skills, reading recognition, vocabulary word identification, digit recollection, scholastic competence and obesity.

When the sample was restricted to siblings who were differently fed

within the same families, however, scores reflecting breast-feeding's positive effects on 10 of the 11 indicators of child health and well-being were closer to zero and not statistically significant – meaning any differences could have occurred by chance alone.

The outlying outcome in this study was asthma; in all samples, children who were breast-fed were at higher risk for asthma, which could relate to data generated by self-reports instead of actual diagnoses.

Some examples of differing benefits: Breast-feeding's beneficial influence on BMI decreased by 66 percent between siblings across families and siblings within families. The magnitude of the beneficial effects of breast-feeding for math, reading, vocabulary and intelligence declined by between 69 and 29 percent, respectively, when comparing data across families to data from within families.

"Instead of comparing across families we are comparing within families, completely taking into account all of those characteristics – both measured and unmeasured – that differ by family, such as parental education, household income and race/ethnicity," Colen explained.

These same differences between samples were found in the analysis of the effects of the duration of [breastfeeding](#).

These findings have implications for health policy, she noted.

"If breast-feeding doesn't have the impact that we think it will have on long-term childhood outcomes, then even though it is very important in the short-term we really need to focus on other things," she said. "We need to look at school quality, adequate housing and the type of employment parents have when their kids are growing up.

"We need to take a much more careful look at what happens past that

first year of life and understand that breast-feeding might be very difficult, even untenable, for certain groups of women. Rather than placing the blame at their feet, let's be more realistic about what breast-feeding does and doesn't do."

Provided by The Ohio State University

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