

Weekend Feeding Programs Can Boost Children's Educational Outcomes

Study for the first time shows that 'BackPack' programs not only provide nutritious meals, but also help children achieve higher reading and math scores

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Programs that provide economically disadvantaged children with food to take home and prepare on the weekends, often referred to as “BackPack” programs, have grown dramatically in recent years. In addition to providing children who are food insecure with nutritious meals, a new study for the first time shows these programs positively impact educational outcomes.

The study, “Weekend feeding (“BackPack”) programs and student outcomes,” provides the first evidence of the causal effects of weekend feeding programs on academic performance in the form of increased reading test scores and suggestive evidence that the programs also raise math scores. These effects appear strongest for the youngest and lowest performing students.

Published in the journal, *Economics of Education Review*, the study is authored by [Mica Kurtz](#), assistant professor of economics at [Lycoming College](#), and [Karen Smith Conway](#), [John A. Hogan Distinguished Professor of Economics](#), and [Robert Mohr](#), associate professor of economics, both at the University of New Hampshire’s [Peter T. Paul College of Business and Economics](#).

Lead author Mica Kurtz earned his master’s degree in economics from the UNH Whittemore School of Business and Economics, now Paul College, in 2010 and

his doctoral degree in economics from Paul College in 2015.

Although weekend feeding programs are frequently promoted as enhancing educational outcomes, there was limited proof. Kurtz, as part of his Ph.D. dissertation, set out to examine the claim by combining primary data on program participation collected from a large [Feeding America](#) Backpack program with administrative data on student test scores and absences in northwest North Carolina elementary schools.

The researchers observed how economically disadvantaged students performed on end of grade tests, both before and after the Backpack program was introduced to a school. After controlling for student and school characteristics known to affect test scores (e.g., student/teacher ratio), they compared these economically disadvantaged students to wealthier students in the same school and to students who attended schools that did not get the benefit of the backpack program.

“The central and most interesting finding is that test scores are improved even though that is not the goal of the program,” Mohr said.

Specifically, the researchers measured the impact in standard deviations (SD) and found a .09 SD increase reading scores for economically disadvantaged students at Backpack schools and a slightly smaller beneficial effect for math scores.

“As an absolute measure, this is only a few additional points on a standardized test, but the magnitude of this impact is quite large compared to other, typically more expensive, nutritional interventions,” Mohr said.

The study also found that the Backpack program especially benefits younger primary school students (3rd graders) and that it benefits students who need it the most (the weakest performers).

The findings are consistent with studies of school breakfast and lunch programs that show that provision of meals (or better meals) to food insecure children can improve educational outcomes, Conway said.

“Weekend feeding programs are a relatively recent innovation and the programs have grown rapidly, both through Feeding America and many other nonprofit organizations. It is estimated that more than 800,000 children nationwide receive food backpacks on any given weekend,” she said. “These programs are also widespread in New Hampshire, for example the program run by the non-profit [End 68 hours of Hunger.](#)”

For many students of low-income families, free school lunches and breakfasts may be the only regular meals they eat. Weekend feeding programs send students home on Friday afternoons with nutritious, easy-to-prepare food to sustain them through the weekend so they can arrive well-fed and ready to learn on Monday morning. Established in Arkansas in 1996, weekend feeding programs have experienced a growth explosion, yet the subject remained unstudied in economics literature for decades.

“Childhood food insecurity is a significant problem for many students in this country; we have school breakfast and school lunch programs to help, but over the weekend many students (and their families) can really struggle,” said Kurtz. “There is strong evidence to suggest that expansion of these programs could be a cost-effective way to not only reduce childhood food insecurity but also improve scholastic outcomes for the neediest students, and this evidence is actionable.”

According to Mohr, this study is an example of the cutting-edge work done by UNH Paul College Ph.D. students. It also builds on Conway’s long record of studying impacts of public programs on children and families and on Mohr’s research examining innovation and technology adoption.

“This paper is also a study of an innovative new idea in alleviating food insecurity,” Mohr said. “It was fascinating to consider the same processes of innovation that I had previously studied in very different contexts.”

The study can be read in full at <https://www.sciencedirect.com/science/article/abs/pii/S0272775720305264>.

- WRITTEN BY:

[Sharon Keeler](#) | Peter T. Paul College of Business and Economics
| sharon.keeler@unh.edu | 6038623775

PETER T. PAUL COLLEGE OF BUSINESS & ECONOMICS



University of New Hampshire

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