Topics in Clinical Nutrition

Backpacks: A program for improving children's readiness to learn and family food security --Manuscript Draft--

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Abstract:	An increasing gap has been seen between the government food assistance programs and those who need help. One program filling the gap is Feeding America's BackPack Program that provides nutritious food to children to eat on the weekends when they may not have access to an adequate food. This project evaluated the impact of the Backpack Program on food security, readiness to learn, and behavioral and mental health of a group of children using a mixed methods approach. Results showed improved food security and increased readiness to learn among participants. The BackPack program may be an effective means for meeting gaps in food assistance for children and their parents.
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Title: Backpacks: A program for improving children's readiness to learn and family food security

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An increasing gap has been seen between the government food assistance programs and those who need help. One program filling the gap is Feeding America's BackPack Program that provides nutritious food to children to eat on the weekends when they may not have access to an adequate food. This project evaluated the impact of the Backpack Program on food security, readiness to learn, and behavioral and mental health of a group of children using a mixed methods approach. Results showed improved food security and increased readiness to learn among participants. The Backpack program may be an effective means for meeting gaps in food assistance for children and their parents.

Key Words. *Food insecurity, child hunger, learning, outcomes*

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Introduction

For many children today, the predominant source of food consumed during the week is provided by the USDA National School Lunch and National Breakfast programs. The reality is that on weekends, there may be limited or no food available for these children. Food insecurity refers to reduced, unreliable or socially unacceptable access to nutritionally sufficient and safe foods.¹ In 2013, more than one in five U.S. children, or 21%, lived in households that experienced food insecurity.²

Repeatedly, food insecurity and hunger have been shown to have an adverse effect on children's health, growth and development.³ Evidence has linked food insecurity with a reduced ability to learn. Food insufficiency among children between 6 to 12-years has been associated with poorer scores in mathematics, repeating a grade level, and school absenteeism.⁴ Coleman-Jensen et al⁵ found food-insecure children had below-average grades and test scores. In constructs related to readiness to learn, Bellisle⁶ noted food-insecure children had lower attention spans. Similarly, Melchior et al⁷ found that children from food-insecure homes experienced persistent symptoms of hyperactivity/inattention twice as much as were children who are not food insecure. In addition to the impact on cognition and learning, food insecure children have more behavioral and mental health issues. Risky behavior, dropping out of school, and delinquency among youths have been linked to poor academic performance and food insecurity and also are thought to be cumulative, persisting into adolescence and adulthood.⁸⁻¹⁰

Food insecurity hinders a child's development and may depress the upward trajectory of a child's educational success.³ Estimates of childhood hunger costs in our nation are close to 167.5 billion dollars due to lost economic productivity, poor educational outcomes and unavoidable health care costs.¹¹

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4 Multiple efforts are made to assist these individuals and families. Federal policies such as
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6 the Healthy, Hunger-Free Kids Act of 2010¹² along with federal programs such as the
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8 Supplemental Nutrition Assistance Plan (SNAP) and the National School Lunch Program seek to
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10 provide supplemental food assistance to children and their families. However, a gap has been
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12 found between government food programs and the need for assistance.^{13,14} Often nonprofit
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14 organizations help fill the difference.¹⁵
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19 Feeding America is the largest domestic hunger relief, nonprofit organization in the
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21 country. Among its many programs and services, the Backpack Program provides nutritious food
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23 to children to eat on the weekends when the children do not receive school lunch and may go
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25 without adequate food. The Backpack Program serves over 450,000 children nationwide¹⁶ and is
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27 administered by Feeding America to help improve food security in children and families. The
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29 program is administered at schools with high food insecurity rates. The average cost of the
30
31 program is \$4.50 per backpack of food. The Backpack food consists of: breakfast cereal, shelf
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33 stable milk, a protein such as canned tuna, juice boxes, pasta such as macaroni and cheese, fruit
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35 cup, can of vegetables, granola bars, and fresh produce.
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41 To date, few studies have been conducted to evaluate the impact of the program. In a
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43 study by Cotugna and Forbes,¹⁷ outcomes for a Backpack Program were assessed using surveys.
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45 Parents expressed gratitude for the program and some parents said it helped them feed their
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47 families. Site staff noted increased levels of energy and learning concentration. Students
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49 indicated that the Backpack foods lasted the weekend and were often shared with siblings.
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52 However, quantitative data were not reported.
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55 The purpose of this project was to evaluate the impact of a Backpack Program on
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57 participating children's food security, readiness to learn, and behavioral and mental health. The
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4 combination of quantitative and qualitative methods used in this project represent an effort to
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6 operationalize the program's effect.
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9 **Procedure**

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11 A single-arm, non-blinded study design that included quantitative and qualitative
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13 measures was conducted at a public elementary school in west-central Florida. The site was
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15 chosen for the evaluation because of its high proportion of students who receive free and reduced
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17 lunches. The 496 students at the elementary school was comprised of 76% African-American,
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19 17% Hispanic, 5% Caucasian and 2% not disclosed. Based on the National School Lunch
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21 Program guidelines, 91% of the students were eligible for free lunch and 4% were eligible for
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23 reduced lunch. Because of the high rate of free and reduced lunches at this school, all children
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25 were offered a backpack of food. The food was distributed to the children at dismissal on
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27 Fridays.
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33 The university's Institutional Review Board and the school district approved the project,
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35 which used a convenience sampling of children, parents and teachers. A project description was
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37 provided to all parents, and those interested in participating completed the informed consent for
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39 themselves and their children.
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43 The children's survey was eight questions in length and addressed individual food
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45 security, readiness to learn, anxiety, depression, behavior, absenteeism, and academic grades.
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47 The child's survey asked "do you come to school without eating breakfast because there wasn't
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49 enough food at home?" with a 3-point Likert response scale. To evaluate the program's impact
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51 on readiness to learn, the child survey asked "do you have trouble paying attention at school
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53 because you are hungry?" and "do you have trouble learning at school because you are hungry?"
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55 and "how often are you absent from school?". The child survey asked "do you worry about not
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4 having enough food to eat?” and “do you get angry a lot at school?” and “are you sad a lot?” to
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6 evaluate the impact of the program on mental health.
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9 Teachers also completed informed consent forms and were trained on survey procedures
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11 by the principal investigator (PI). They assisted the students in completing the survey at the start
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13 of the school year and the last month of the school year.
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16 The parental evaluation was sent home for completion at the start of the school year and
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18 again in the last month of the school year. The parent’s survey was 10 questions in length and
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20 measured household food security and children’s anxiety, depression, absenteeism, behavior and
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22 academic grades. The parent survey asked “do you feel your child worries more than usual?” and
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24 “do you feel your child gets angry more than usual?,” and “do you feel your child is sad or
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26 depressed?” on a 3-point Likert scale in order to assess the program’s impact on mental health.
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28 To evaluate the impact of the program on food security, the parent survey included the USDA
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30 Food Security Survey Module,¹⁸ and to assess readiness to learn, the survey for parents asked
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32 about their child’s absenteeism on a 3-point Likert scale.
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38 Using a convenience sample, semi-structured interviews were conducted with parents,
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40 students and teachers as a qualitative measure at the end of the school year to evaluate the impact
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42 of the Backpack Program. The PI, trained in interviewing, conducted the interviews. Questions
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44 for the interviews were derived from a literature review to fulfill the goals of the evaluation. The
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46 following questions for parents included: 1) what effect does the backpack program have on the
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48 amount of food available in your home?; 2) have you noticed any difference in your child’s
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50 school performance, readiness to learn or attendance since the program started?; 3) do you see
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52 any difference in your child’s behavior or well-being since the program started?
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Questions posed to students on the Backpack program included: 1) have you noticed any difference in the amount of food available in your home since the program started?; 2) have you seen any difference in how well you can pay attention since the program started?; 3) have you noticed a change in your energy levels since the program started?; 4) have you noticed a change in your grades or readiness to learn since the program started?; 5) have you noticed a change in your emotions like being sad or angry since the program started?

The questions for teachers were: 1) have you noticed any difference in your students' school performance, readiness to learn or attendance since the program started?; 2) have you seen any difference in your students' self-control or classroom behavior since the program started?; 3) have you noticed any changes in your students' energy levels since the program started? Respondents were asked to elaborate on answers to the questions. The interviews were conducted until data saturation was reached and themes were derived through iterative readings and discussion of the expanded notes by the investigators.

Description of the Survey Response

Surveys were completed by a total of 120 students and 52 parents which represents a 24.2% response rate. None of the parents completed both the pre- and post-survey and only 42 students completed both pre- and post-surveys. The lack of paired data samples did not allow for changes within subjects. Thus, a between-subject analysis was done to examine differences between pre- and post-test scores on each outcome measure. Because of the homogeneity of the student body and privacy issue concerns expressed by the school district, demographic information was not captured on the participants.

Data in table 1 provide means and standard deviation for pre- and post-test items. Students were less likely to have hunger-induced difficulties in learning at the end of the program than the

beginning. No self-reported indications of behavioral or emotional differences were statistically significant. However, an examination of effect sizes indicated that improvement in self-reported hunger-related inattentiveness and sadness may have been demonstrated with a larger sample size. Accordingly, parents showed a non-significant trend toward reporting less food insecurity at the end of the program than at its inception. However, the size of this difference approaches the commonly accepted cutoff for a medium-sized effect, suggesting an improvement in food insecurity if the sample size had been larger. Parents reported greater anxiety, sadness and absenteeism at the end of the program. These differences were not reflected in the student self-reports. Students' grades were not reported in these analyses.

[Insert Table 1 here]

Qualitative Information

Interviews were conducted until data saturation was reached. Fifteen interviews were conducted; 5 with parents, 4 with teachers, and 6 with children. Results from the thematic analysis of the in-depth interviews identified three main themes. The first theme was improved ability to pay attention. Teachers reported that the children were better able to concentrate after the Backpack program began. "Right after the food is given out, my students pay attention more and do better in class." (Teacher #1). The children's responses also reflected this same theme. "When I am hungry, it is hard to pay attention, but with the Backpack food, I can really listen to my teacher." (Child #2).

The second theme identified was improved food security. Parents reported that the Backpack Program helped with more food available for the family and decreased stress and anxiety associated with not having enough food for the family. "With the food from this program, I can stretch the food I buy at the grocery store all week and not worry as much." (Parent #2). Children

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4 also reported that the program helped their family with food. “The Backpack food helps my
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6 family have more food.” (Child #4). Somewhat related to this theme was the report from some
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8 teachers that they used extra Backpacks to stock their classrooms with nonperishable food for
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10 children that might come to school without eating. “I don’t have to spend my own money to
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12 make sure I have food for my students when they are in need.” (Teacher #3).
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16 A third and unexpected theme that emerged was requests for fresh produce by students. The
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18 Backpacks all contained ample amounts of fresh fruits and vegetables. Parents reported that their
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20 children began asking them to buy some of the produce items they had received in the Backpack.
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22 “My daughter keeps asking me to buy healthy foods now like grapes and cucumbers.” (Parent
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24 #3).
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27 28 **Discussion** 29

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31 The project was conducted to identify the value of a Backpack food assistance program
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33 for participating children. The goal of the Backpack Program was to help improve food security
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35 in children and families. Based on the results of the information from parents and children, the
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37 program seemed to achieve its goal. There was a consistent theme among parents indicating
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39 greater food security. Not only did parents report that the program helped them make their food
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41 purchases last for the entire week, but they also felt less stress about this issue.
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46 Children that go to school hungry have diminished readiness to learn.²¹ They have more
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48 difficulty paying attention and poorer academic performance.^{3,4} This project indicates that the
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50 Backpack program improved several parameters that affect readiness to learn. The children in
51
52 our study reported significantly less hunger-induced difficulty learning at the end of the
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54 Backpack Program. Through interviews, children reported an improved ability to pay attention
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56 better in the classroom. This finding was reinforced by teachers who reported that their students
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4 paid attention in class after the Backpack Program was introduced. Teachers also reported that
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6 attendance was better on backpack distribution days.
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9 Compared to previous research,^{8,10} our study did not find significant changes or
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11 qualitative themes regarding behavior or mental health indices, despite revealing small effect
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13 sizes showing improvements on sadness and hunger-induced inattentiveness. Indications of
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15 mental health and behavioral patterns were unique to this study and consisted of a single
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17 question on each concept. This approach leaves a question of reliability of these indices.
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19 Additionally, there is debate in the literature on the validity of self-reporting among children on
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21 complex constructs such as causes of inattention. Many factors have an impact upon the
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23 behavioral and mental health indices that were not measured in this study. Further, the missing
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25 data did not allow for a true pre-post comparison.
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31 The study has additional limitations. The low return rate of surveys leaves questions
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33 about the representativeness of the sample. Incentives may help future studies to obtain a higher
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35 response rate. Asking teachers to complete surveys on all the children in their class, plus helping
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37 the students complete their own surveys, were very burdensome. Objective data were not used to
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39 assess school performance and attendance. For future studies, it would be helpful to obtain
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41 attendance records and grade trends from school administration in order to more accurately
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43 assess the effects of the Backpack Program. Some items in the child's survey were based on a
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45 questionnaire validated with adults and children 12 years and older, not elementary school
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47 children. As such, the validity of the measure was not demonstrated in this population. The
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49 investigator's presence during the collection of qualitative data may have affected the subjects'
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51 responses.
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57 **Implication for Dietetic Practice**

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4 The results of this project have implications for practice. First, this study reinforces the
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6 need for community outcome studies on nutrition and food assistance programs. To date, only
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8 one other study has looked at the impact of the Backpack program and neither study used
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10 quantitative data. If these results are validated by subsequent investigators, they could provide
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12 the evidence needed for funding and policy issues. Furthermore, this project demonstrates the
13
14 challenges of conducting community-based research. It is important to use validated measures
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16 when available. When not available, using a mixed methods approach may strengthen the results.
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18 Finally, when evaluating programs such as Backpack, it is important to include measures not
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20 only related to nutrition, but to also consider behavioral, personal, and mental health variables.
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26 **Conclusion**

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28 This is one of the first projects to assess a Backpack food assistance program with both
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30 quantitative and qualitative indicators of food security, readiness to learn, behavioral issues and
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32 mental well being. The Backpack program appears to improve food availability for families and
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34 decrease stress over food insecurity. Readiness to learn and the ability of students to concentrate
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36 also improved with the program. This assistance program seems to help fill the gap between
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38 government food program supplies and the actual needs of children and their families.
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References

1. Bickel, G., Nord, M., Price, C., et al. *Measuring food security in the United States: Guide to measuring household food security*: 2000. Alexandria, VA: USDA, Food and Nutrition Service, Office of Analysis; 2005.
2. Coleman-Jensen, A., Gregory, C., Singh, A. *Household food security in the United States in 2013: Statistical supplement*. United States Department of Agriculture. Economic Research Service. Table S-3. <http://www.ers.usda.gov/publications/ap-administrative-publication/ap066.aspx>. Update April 27, 2016. Accessed September 28, 2016.
3. Jyoti, D.F., Frongillo, E.A., Jones, S.J. Food insecurity affects school children's academic performance, weight gain, and social skills. *J Nutr*. 2005;135(12):2831-2839.
4. Alaimo, K., Olson, C.M., Frongillo, E.A. Food insufficiency and American school-aged children's cognitive, academic and psychosocial development. *Pediatrics*. 2001;108:44-53.
5. Coleman-Jensen, A., Nord, M., Singh, A. *Household food security in the United States in 2012* (Economic research report No. [ERR-155] 41PP). Washington, DC: U.S. Department of Agriculture, Economic Research Service; 2013.
6. Bellisle, F. Effects of diet on behaviour and cognition in children. *Brit J Nutr*. 2004;92:227-232.
7. Melchior, M., Chastang, J-F., Falissard, B., Galéra, C., Tremblay, R.E., Côté, S.M., et al. Food insecurity and children's mental health: A prospective birth cohort study. *PLoS ONE* 2012;7(12): e52615. doi:10.1371/journal.pone.0052615.
8. McIntyre, L., Williams, J.A., Lavorato, D.H., Patten, S. Depression and suicide ideation in

late adolescence and early adulthood are an outcome of child hunger. *J Affect Disord.* 2013;150:123–129.

9. Kleinman, R.E., Murphy, J.M., Little, M., Pagano, M., Wehler, C.A., Regal, K., Jellinek, M.S.

Hunger in children in the United States: potential behavioral and emotional correlates. *Pediatrics.* 1998;101:3.

10. Victora, C.G., Adair, L., Fall, C., Hallal, P.C., Martorell, R., Richter, L., Singh, S. Maternal and child undernutrition: Consequences for adult health and human capital. *Lancet.* 2008;371:340–357.

11. Center for American Progress. Hunger in America: Suffering we all pay for.

<https://www.americanprogress.org/issues/poverty/report/2011/10/05/10504/hunger-in-america/>.

Updated October 5, 2011. Accessed September 28, 2016.

12. Food and Nutrition Services, United States Department of Agriculture. *Healthy Hunger*

-Free Kids Act. Updated August 22, 2016. [http://www.fns.usda.gov/school-meals/healthy-](http://www.fns.usda.gov/school-meals/healthy-hunger-free-kids-act)

[hunger-free-kids-act.](http://www.fns.usda.gov/school-meals/healthy-hunger-free-kids-act) Updated August 22, 2016. Accessed September 28, 2016.

13. Bernhardt, A. The Good Jobs Deficit: A Closer Look at Recent Job Loss and Jobs Growth

Trends Using Occupational Data. The National Employment Law Project.

<http://www.nelp.org/page/-/Final%20occupations%20report%207-25-11.pdf?nocdn=1>. Updated

July 2011. Accessed September 30, 2016.

14. Monea, E., Sawhill, I. An Update to “Simulating the Effect of the ‘Great

Recession’ on Poverty. [https://www.brookings.edu/research/an-update-to-simulating-the-effect-](https://www.brookings.edu/research/an-update-to-simulating-the-effect-of-the-great-recession-on-poverty-2/)

[of-the-great-recession-on-poverty-2/](https://www.brookings.edu/research/an-update-to-simulating-the-effect-of-the-great-recession-on-poverty-2/) Updated September 13, 2011. Accessed September 28,

2016.

- 1
2
3
4 18. Guo, G. Beyond the public safety net: the role of nonprofits in addressing material
5
6
7 hardship of low-income households. *Nonprofit Volunt Sect Q*. 2010;39:784–801.
8
9
10 19. Feeding America. Backpack Program. [http://www.feedingamerica.org/about-us/we-feed-](http://www.feedingamerica.org/about-us/we-feed-children/backpack-program/)
11
12 [children/backpack-program/](http://www.feedingamerica.org/about-us/we-feed-children/backpack-program/) Updated 2016. Accessed September 28, 2016.
13
14
15 20. Cotuga, N., Forbes, S. A Backpack Program provides help for weekend child hunger. *J*
16
17
18 *Hunger Environ Nutr*. 2007;2(4):39-45.
19
20
21 21. Coleman-Jensen, A., McFall, W. and Nord, M. *Food insecurity in households with children:*
22
23 *prevalence, severity, and household characteristics, 2010-11.*
24
25
26 <http://www.ers.usda.gov/media/1120651/eib-113.pdf> Updated May 2013. Accessed September
27
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Table 1. Pre- and post-test descriptives and univariate analyses of child and parent self-reported variables.

Child Survey	Pre-test		Post-test					
	n=89		n=73					
	Mean	sd	Mean	sd	F	df	p	$n^2_{partial}$
No breakfast	.45 ^a	.593	.43	.630	0.03	41	.844	.001
Inattentive	.58 ^a	.731	.42	.499	2.41	42	.128	.045 ^c
Worry about food	.54 ^a	.745	.44	.634	0.21	40	.532	.01 ^c
Learning	.58 ^a	.731	.30	.465	5.71	42	.021	.120 ^d
Anger	.33 ^a	.650	.38	.623	0.22	41	.643	.005
Sadness	.77 ^a	.718	.63	.655	1.66	42	.208	.038 ^c
Absences	.57 ^a	.501	.73	.554	2.33	39	.135	.056 ^c
Parent Survey	Pre-test		Post-test					
	n=28		n=24					
	Mean	sd	Mean	sd	F	df	p	$n^2_{partial}$
Food insecurity	2.63 ^b	.166	1.81	.180	3.16	58	.081	.052 ^c
Child's anxiety	.167 ^a	.380	.53	.614	6.56	56	.013	.105 ^d
Child's anger	.25 ^a	.442	.48	619	2.52	55	.118	.044 ^c
Child's sadness	.04 ^a	.204	.35	544	7.12	56	.010	.113 ^d
Absences	.17 ^a	.381	.62	493	14.10	56	.001	.201 ^e

Scale: ^a0-2; ^b0-9 $\eta^2_{partial}$: ^csmall effect size; ^dmedium effect size; ^elarge effect size

Abbreviations:

sd= standard deviation

F= F statistic

df= degrees of freedom

p= p-value

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Response to Review Comments

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