



Nutrition for the Future

STEP UP 2021

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Objectives

- Review the importance of nutrition
- Learn about five different school programs
- Explain the benefits and limitations
- Takeaways



Programs

1.

School Breakfast
Program

2.

National School Lunch
Program

3.

Farm to School Program

4.

School Milk Program

5.

Building Healthy
Communities



School Breakfast Program

Purpose

- Examine if the School Breakfast Program impacts attendance and test scores
- 168 schools were introduced to a new School Breakfast Program or modifications were made to those who already had access to the program.
- Modifications that were implemented varied from changing the location of the program to altering the payment structure.
- Comparison to other programs such as the Universal free breakfast (UFB) or Breakfast in the Classroom (BIC) to evaluate costs and location concerning the traditional School Breakfast Program (SBP)





School Breakfast Program (SBP)

Has provided free or reduced - cost meals to millions of children

Participant Details

- 1000 public elementary schools in Wisconsin, USA
- Except for students attending school in the Milwaukee Public School District.
- Participants ranged from grade one to five depending on the variable being analyzed.
- The samples consisted of both male and female students

Study Details

- Administrative data was analyzed from 2009-2014
- Attendance analysis included 481,799 students in grades one to five
- Test score analysis included grades three to five, totaling 248,328 students

(Bartfeld et al., 2019)



Comparison to other Programs

Universal Free Breakfast

- Meant to decrease financial barriers
- Linked to greater participation
- Increased attendance compared to the traditional School Breakfast Program

Breakfast in Classroom

- Structured differently by offering breakfast in the classroom
- No association between with attendance scores
- Reduced academic time concerns

(Bartfeld et al., 2019)



Benefits

1

Shown to increase the likelihood of eating breakfast and consuming food of nutritional quality

2

Associated with lowering household food insecurities' risk

3

Improves engagement and academic performance

(Bartfeld et al., 2019)

Limitations

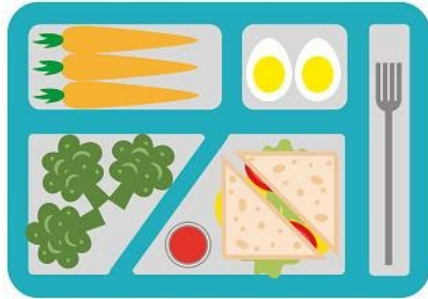
- Generalizability concerns as the study covered statewide rather than district or city-wide data
- In addition, it was a within-school variation which restricts the program only to schools that are willing or available to change their school problems
- The study did not contain individual data to help predict future attendance and test scores



National School Lunch Program

National School Lunch Program (NSLP)

Has provided lunch to over 31 million children in the United States



- Provides an opportunity for students to receive a nutritious lunch at a reduced cost or free every school day
- Program is federally-assisted
- Plays a crucial role in providing children from low-income families with adequate nutrition
- The United States Department of Agriculture updated the nutrition standards in 2012, due to the adolescent obesity rate rapidly increasing and nutrition disparities across schools

(Terry-McElrath et al.,
2015)

Nutrition standards implemented into program





Study Details

Participant Details

- Represented students nationally in grades 8, 10, and 12
- Included both genders
- Students were invited to participate for three years
- A \$100 incentive was offered to complete a mailed questionnaire
- Data collected from 792 middle schools and 751 high schools

Study Details

- Research took place in the United States from 2011 to 2013
- Data was collected using a rotating sample design
- The study used seven dichotomous NSLP measures as dependent variables
- School characteristics were independent measures

(Terry-McElrath et al., 2015)



Benefits

1

Increased fruit and vegetable consumption

2

Significant increases in at least four of the National School Lunch Program measures

3

School district disparities were largely eliminated

(Terry-McElrath et al., 2015)

Limitations

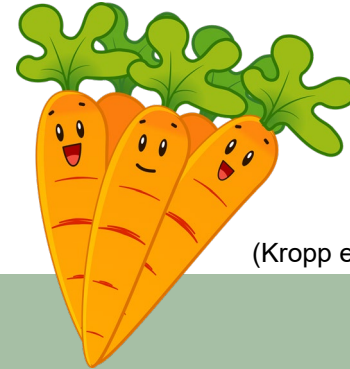
- This study limits schools that report NSLP participation and cannot be generalized to those outside this program
- The study's validity is a concern due to relying on student's self-reporting and the accuracy of the results



Farm to School Program

Purpose

- Increase the cafeteria's local food serving amount and exposure to fruits and vegetables
- Students will internalize their knowledge and continue to eat healthier
- If there are students that cannot afford to continue this diet at home, at least provide a space for them to
- The Farm to School program consists of more than just providing cafeterias with local fruits and vegetables but with hands-on learning such as nutritional education or a school garden



(Kropp et al., 2018)



Farm to School Program (FTS)

Participant Details

- Six elementary schools in Florida, USA
- Grades varied from one to five
- School's enrolled in National School Lunch Program (NSLP)
- Those in the NSLP are students from low income households and are less likely to receive fruits and vegetables at home

Study Details

- Study observed 11,262 meals
- Used three control schools and three treatment schools
- Measured results using plate waste methodologies and self-reporting

(Kropp et al., 2018)

Results

- The results indicated that those schools participating in the Farm to School program did, in fact, increase their intake compared to the control schools.
- An increase in consumption of vegetables of 37% and 11% in fruits



(Kropp et al., 2018)



Benefits

1

Shown to increase the likelihood of eating fruits and vegetables

2

Improves relationship towards fruits and vegetables through exposure and education

3

Creates a safe space for those who do not have the resources to incorporate fruits and vegetables into their diets



Limitations

- Inability to understand what drives the behaviour of change in consumption which can be due to either the freshness of the fruits and vegetables or the nudging from cafeteria workers
- This study also relied on self-reporting as a portion of the data, which can be invalid

A scenic landscape featuring rolling green hills in the foreground, a deep valley with a small settlement in the middle ground, and rugged mountains in the background under a bright blue sky with scattered white clouds. The text "School Milk Program" is overlaid in white, with "Program" underlined.

School Milk Program

Purpose

- Many studies have found that children do not meet the daily milk recommendations set out by Canada's Food Guide.
- This study aimed to measure milk consumption, milk waste and assess factors that contribute to students' milk choice.





School Milk Program

Participant Details

- Six Catholic Schools in Saskatoon, Saskatchewan, Canada
- Included four urban and two rural schools
- Students ranging from grade one to eight
- Total of 1205 student participants consisting both male and female

Study Details

- Mixed-method research design
- Study divided into three phases
- Each phase lasted four weeks
- Phase one + three served plain and chocolate milk
- Phase two was restricted to only plain milk

(Henry et al., 2015)

Benefits

1

Positively changed
behaviours regarding milk

2

Promotes healthy
beverage
environments for
students

3

Provides children and
youth with their key
sources of calcium and
vitamin D

(Henry et al., 2015)

Limitations

- This study had the assumption that one milk carton was consumed daily by each student since there was no limitation on how many a student could purchase a day



Building Healthy Communities

Purpose

- To examine the impact of implementing both physical activity (PA) and health education (HE) in the school system
- With both PA and HE, the program hopes to change food culture by giving students tools such as knowledge and healthy living behaviours.



(Centeio et al., 2018)



Building Healthy Communities (BHC)

Participant Details

- Six elementary schools in midwestern U.S cities
- Focus on grade five students
- Four treatment groups and two control groups

Study Details

- Program took eight months
- Focused on both physical education (PA) and health education (HE)
- 6 components:
 - 1) Healthy kids club
 - 2) Active recess
 - 3) Principal engagement
 - 4) Student leadership program
 - 5) Classroom engagement
 - 6) Quality P.E

(Centeio et al., 2018)



Physical Education Components

1) HEALTHY KIDS CLUB

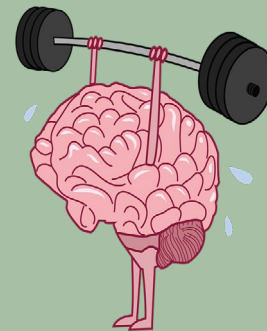
- consists of an afterschool club with healthy snacks and PA opportunities such as a running/ walking club

1) ACTIVE RECESS

- recess is filled with numerous options that encourage physical activity, such as hula hoops, basketballs, and jump ropes

1) QUALITY P.E

- Schools receive a curriculum that promotes quality physical education and equipment to teach it





Health Education Components



1) CLASSROOM ENGAGEMENT

- Focuses on six lessons that should be integrated throughout the year regarding PA and HE

1) STUDENT LEADERSHIP PROGRAM

- Includes students that build teams and hold kickoffs to promote PA and HE

1) PRINCIPAL ENGAGEMENT

- The principal is involved in this program by supporting the policies and focusing on distributing messages through newsletters and announcements



Benefits

1

Positively changed
behaviours towards
healthy eating

2

Starting this program
increases the likeliness
that it will continue onto
later years

3

Benefits students by
preventing obesity,
resulting in higher self-
esteem and better school
performance.



Limitations

- Generalizability since the program only collected fifth graders' data, making it less applicable to older students.



Takeaways

- Nutrition is very important in regards to education
- Implementing these programs can help low-income students
- Starting these programs early can lead to the development of healthy life long skills and eating habits
- All programs discussed provided several benefits. If feasible, all schools should encourage one or more of these programs into their curriculum to give students a chance to grow and thrive.

A scenic landscape featuring rolling green hills in the foreground, a dense forest of dark green trees in the middle ground, and two prominent mountains in the background. The sky is a vibrant blue, filled with large, fluffy white clouds. The text "Thank you!" is centered in the image in a large, white, sans-serif font.

Thank you!

References

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