Intervention IP-129: After-school Health Promotion Program for Hispanic Elementary School Children

This intervention was a 12-week after-school program for Hispanic elementary school children in El Paso, Texas. The intervention combined classroom lessons with physical activity sessions, both conducted by study personnel. The program was designed to help children make healthier food choices, improve fitness, and lower their risk of obesity. Participants showed better results in body weight, fitness, and healthy eating intentions. Some benefits also appeared in classmates who did not directly participate in the intervention.

Overview

Purpose of Intervention:

Promote healthier lifestyles and reduce obesity risk in Hispanic elementary school children through an after-school program combining health education and exercise.

Intervention Type:

Research-Tested — *Interventions with strong methodological rigor that have demonstrated short-term or long-term positive effects on one or more targeted health outcomes to improve minority health and/or health disparities through quantitative measures; Studies have a control or comparison group and are published in a peer-review journal; No pilot, demonstration or feasibility studies.*

Intervention Details

Intervention was Primarily Driven, Led, or Managed by:

Academic/Clinical Researchers Only

Citations:

- de Heer HD, Koehly L, Pederson R, Morera O. Effectiveness and spillover of an after-school health promotion program for Hispanic elementary school children. American journal of public health. 2011 Oct;101(10):1907-13. Epub 2011 Aug 18.
  Relevance: Main Intervention
- De Heer F, Morera O, Warren M, Chaudhari L, De Heer HD. At risk or not: Comparing normative and criterion-referenced Body Mass Index standards among Mexican American children. Archivos Latinoamericanos de Nutrición. 2013;63(2):126-33.
  Relevance: Evaluations and Assessments

Adaptation of Another Research-based Intervention:

Yes

Name of Original Intervention:

Bienestar wellness curriculum

URL to original Intervention:

https://sahrc.org/childrens-programs/

Citations:

- Treviño, R.P., Hernandez, A.E., Yin, Z., Garcia, O.A. and Hernandez, I., 2005. Effect of the Bienestar Health Program on physical fitness in low-income Mexican American children. Hispanic Journal of Behavioral Sciences, 27(1), pp.120-132.

Intervention Primary Outcomes were comparable to the original:

No

Specify*:

We used the After School Student Questionnaire (ASSQ) from the CATCH Kids club instead: https://catch.org/wp-content/uploads/2014/10/CKCstudy-copy.pdf

Additional Influences:

- Kelder, S., Hoelscher, D.M., Barroso, C.S., Walker, J.L., Cribb, P. and Hu, S., 2005. The CATCH Kids Club: a pilot after-school study for improving elementary students' nutrition and physical activity. Public health nutrition, 8(2), pp.133-140.

Contact Information

Primary Contact Affiliation:

Northern Arizona University

Intervention URL:

Results

Intention

Improve minority health or the health of other populations with health disparities (e.g. rural populations, populations with low SES)

Intervention Primary Outcome:

The primary outcomes were BMI, aerobic capacity, dietary intentions, and dietary knowledge.

Key Findings:

Participants in the intervention group exhibited lower BMI percentile (P=0.015). Among all measured students in a classroom, which included both the intervention group and other students who agreed to be measured but not participate in the intervention, having a greater percentage of students in the intervention group was a predicter of improved health outcomes, as seen in lower BMI percentile (b=-2.98, P=0.045), higher aerobic activity (b=3.87, P=0.012), and greater intention to eat healthy (b=0.81, P=0.046). These spillover effects suggest that the program's impact was larger when a larger number of children in a classroom were enrolled in the intervention.

Statistical Method Used:

Changes in outcomes were determined using 3-level hierarchical linear models (multilevel random-effects regression) that compared follow-up outcomes adjusted for baseline and covariates, while accounting for the fact that students were clustered within classrooms and schools. Measuring spillover effects was possible by creating an intervention exposure indicator variable based on the proportion of students in the classroom who participated in the intervention.

Was statistical method used to analyze data from original Intervention comparable to the original:

Yes

Evaluations and Assessments

Were Any of the Following Assessments Conducted (Economic Evaluation, Needs Assessment, Process Evaluation)?:

No

Demographic and Implementation Description

Diseases, Disorders, or Conditions:

Obesity

Race/Ethnicity:

Hispanic or Latino

Populations with Health Disparities:

People with Lower Socioeconomic Status (SES), Racial and Ethnic Minority Populations

Age:

Children (1 - 9 years)

Socio-demographics / Population Characteristics

Community Type:

Urban / Inner City

Other Populations with Health Disparities:

Unspecified

Geographic Location:

Texas, El Paso

Socio-Economic Status:

Low SES

Research Framework

		Levels of Influence			
		Individual	**Interpersonal**	**Community**	**Societal**
Determinant Types	**Biological**				
	Behavioral	✔	✔		
	Physical / Built Environment				
	Sociocultural Environment	✔	✔		
	Health Care System				

Community Involvement

The community's role in different areas of the Intervention (Choices are "No Role", "Participation", and "Leadership"):

Design:

No Role

Dissemination:

No Role

Evaluation:

No Role

Implementation:

Leadership

Outreach:

No Role

Planning :

No Role

Recruitment:

Participation

Sustainability:

No Role

Characteristics and Implementation

Intervention Focus Area:

Behavior Change, Social/Societal Change

Disease Continuum:

Primary Prevention

Delivery Setting:

Schools / Colleges

Mode of Delivery:

In-person

Who delivered the Intervention?:

Community Health Worker/Promoters, Candidates for PE Teacher Undergraduate Degrees

Conceptual Framework

Intervention Theory:

Social Cognitive / Social Learning Theory

Intervention Framework:

Social Ecological Model

Implementation

Intervention Study Design:

Individual Randomized Controlled Trial/Comparative (requires random assignment, a control/comparison group, and pre and post intervention outcome assessments)

Targeted Intervention Sample Size:

901

Actual Intervention Sample Size:

804

Start Year:

2008

End Year:

2008

Intervention Exposures

Duration of Intervention/How Long it Lasted:

1-3 months

Frequency of Intervention Delivery:

Twice Weekly

Number of Sessions/Meetings/Visits/Interactions:

More than 10 Sessions

Average Length of Each Session/Meeting/Visit/Interaction:

1-2 Hours

Format of Delivery:

Group (e.g. Community leaders)

Highest Reading Level of Intervention Materials Provided to Participants:

Grade 4-5

Adaptations and Modifications

Were modifications made?

Intervention Elements	Modified
Content	No
Context	No
Implementation	Yes
Funding	No
Organization	No
Participants	No
Providers	Yes
Sociopolitical	No
Stages of Occurrence	Yes

Modification Details

	Explanation
Implementation	
Delivery, Exposure, Study Design	We combined the Bienestar curriculum with the CATCH kids club after-school physical activity program. The intervention was assigned at the classroom level. The intervention measures were modified and translated to be appropriate for non-English speakers and children with lower literacy levels.
Providers	
Training / Skills	The intervention was delivered by the Community Health Workers and student PE teachers.
Stages of Occurrence	
Planning/Pre-implementation/Pilot	The intervention was adapted before the implementation during the planning phase.

Impact, Lessons, Components

Produced an impact or change beyond the primary or secondary outcome:

Yes

A spillover effect was observed where having a greater percentage of classmates participating in the intervention resulted in better health outcomes for the entire class, even for children who were not in the intervention group.

Essential Aspects for Success:

To mitigate the risk of teacher turnover previously reported in daily after-school interventions, the intervention was held twice a week for the duration of a regular PE session.

Lessons Learned

Key Lessons Learned and/or Things That Could be Changed or Done Differently:

While all health education materials were bilingual, the language of choice for teaching was often English, possibly limiting the ability of monolingual Spanish-speaking students to follow the health education portion of the after-school program. Individual attendance rates were not recorded, so an assessment of a potentially more accurate dose–effect relation was not possible. Limited resources made it impossible to conduct long-term follow-ups to assess whether the effects were maintained.

Insights Gained During Implementation

Insight Category	Insight Description
Recruitment	Only the 2 schools with the highest socioeconomic status did not reach the maximum number of allowed participants in the after-school project (50/school).

Intervention Components

Intervention Has Multiple Components:

Yes

Assessed Each Unique Contribution:

No

Products, Materials, and Funding

Expertise, Partnerships, and Funding Sources

	Used for Implementation	Needed for Sustainability
Expertise		
Health Education / Health Literacy	Yes	Unknown
Partnerships		
School system (e.g. school administrators, health educators, daycares, preschools, private & public schools)	Yes	Unknown
Universities	Yes	Unknown
Funding Sources		
Public funding (e.g., federal, state or local government)	Yes	Unknown
Private funding (e.g., foundations, corporations, institutions, facilities)	Yes	Unknown

Product/Material/Tools

	Tailored For Language	Language(s) if other than English	Material
Outreach/Recruitment Tools			
Informed Consent Form	Yes	Spanish	This form is no longer available.
Participant Educational Tools			
Brochures/Factsheets/Pamphlets	Yes	Spanish	https://sahrc.org/childrens-programs/
Measurement Tools			
Standardized Instrument/Measures	Yes	Spanish	https://www.fitnessgram.net/
Non-Standardized Instruments/Surveys/Questionnaires	Yes	Spanish	https://www.fairfaxcounty.gov/neighborhood-community-services/sites/neighborhood-community-services/files/assets/documents/prevention/partners%20in%20prevention/catch_kids_evaluation.pdf

Implementation Materials and Products

	Material
Implementation/Delivery Materials	
Coordinator or Facilitator’s Guides, Curricula	https://sahrc.org/childrens-programs/
Coordinator or Facilitator’s Guides, Curricula	https://catch.org/program/physical-education/
Implementation/Output Materials	
No Implementation/Output Materials provided.	

Articles Related to Submitted Intervention

	Article
Reports/Monographs	
Methodology	http://digitalcommons.utep.edu/dissertations/AAI3358902
Additional Articles	
No Additional Articles provided.	