

Head Start Partnership to Prevent Childhood Obesity in New York State

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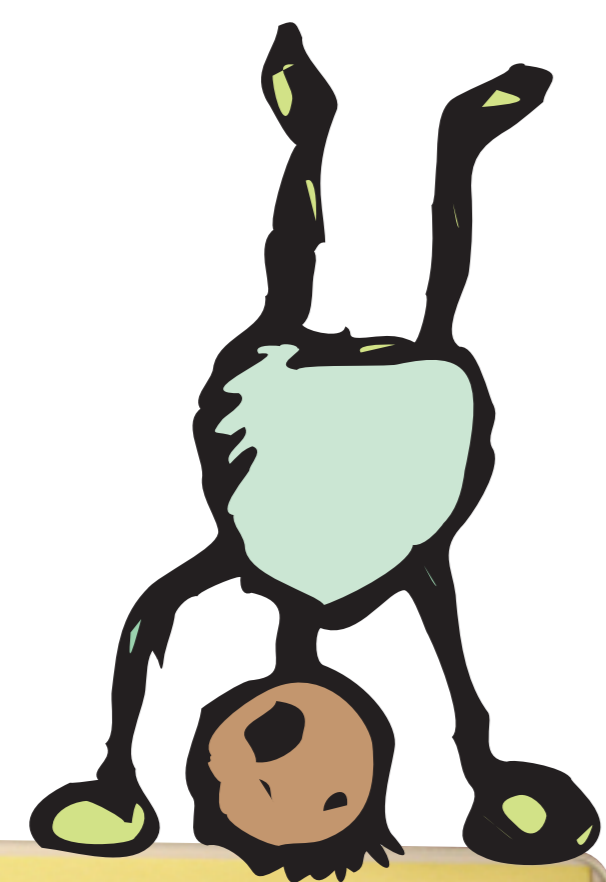
Background

Childcare centers care for increasing numbers of young children, with many children spending as much time in childcare as in their own homes. Children's dietary practices and activity patterns are influenced by the childcare setting, suggesting that childcare staff and the childcare environment are important mediators in childhood obesity prevention efforts.

Curricular interventions have been shown to modify behaviors associated with childhood obesity. *The Health and Fitness by Age 5* intervention is based on two curricula implemented to increase physical activity at the childcare center and reduce TV viewing at home.¹

Purpose

To implement two curricula designed to increase physical activity and decrease television viewing among preschool children, and to evaluate the impact on children's obesity measures.



¹Dennison BA, Russo TJ, Burdick PA, Jenkins PL. An intervention to reduce television viewing by preschool children. Arch Pediatr Adolesc Med. 2004;158:170-176.

Methods

Setting

Eleven Head Start centers operated by Albany County Opportunities, Inc., were assigned as intervention (N=4) or control (N=7) sites. The intervention centers were located in Arbor Hill, an inner-city neighborhood in Albany, New York.

Intervention Center Staff

- Prior to the intervention, classroom and family support staff participated in focus groups to elicit their views on childhood obesity and to assess current policies/practices related to foods and beverages, physical activity and media use in Head Start centers.
- Classroom staff received training, materials, and equipment to implement the *Sports Play and Active Recreation for Kids – Early Childhood (SPARK-EC)* curriculum and the *Fit 5 Kid's Reduction of TV Viewing Preschool Curriculum*. Implementation was assessed using questionnaires completed by teachers.

Child Data Collected

- Classroom staff were trained to obtain height and weight measures using a simplified protocol, electronic scales and stadiometers. Sex-specific Body Mass Index-for-age percentiles were used to determine weight status categories.
- At baseline, parents/guardians completed a *Health and Fitness Questionnaire*. Questionnaire variables included hours of TV/video/video game viewing, TV in bedroom, TV with dinner, TV and snacking, family mealtime, and hours of moderate and vigorous activity.

Human Subjects

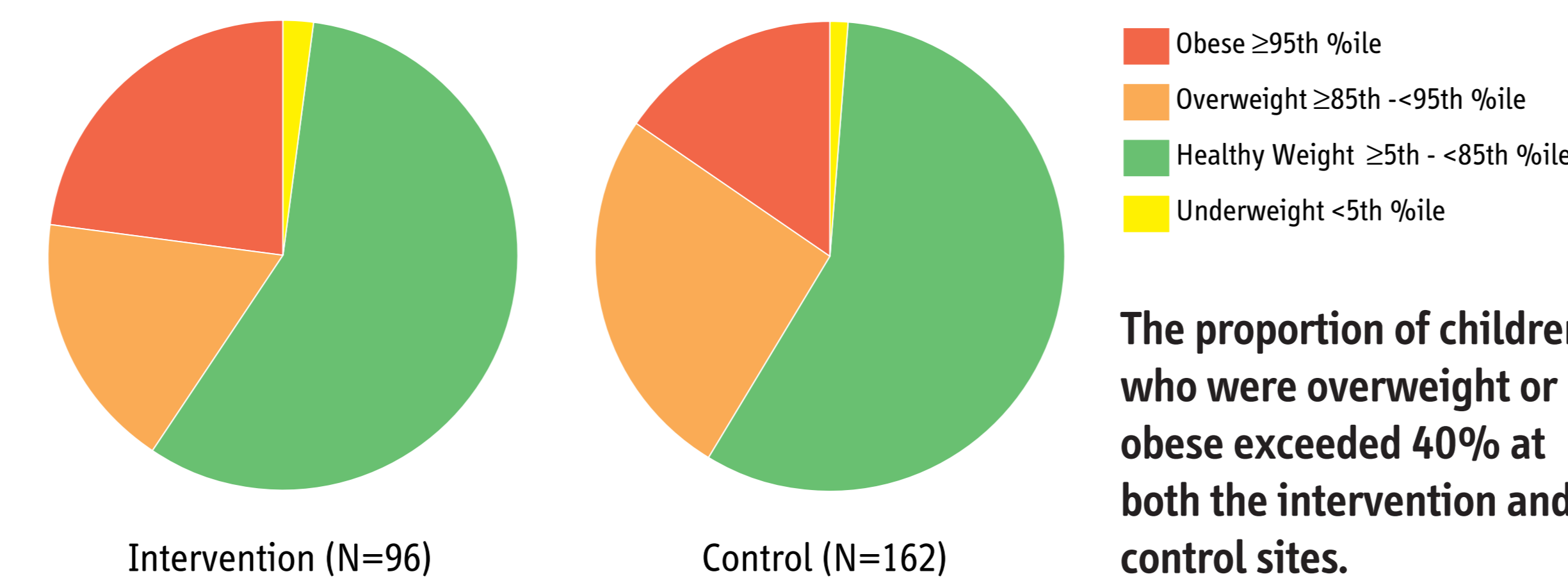
The Institutional Review Board, New York State Department of Health, approved the study protocol.

Baseline Characteristics

- At baseline, 419 children were enrolled in 11 intervention and control sites. Complete anthropometric data were obtained for 258 children. Health and Fitness Questionnaires were returned with consent for 242 children. Complete anthropometric data and questionnaires were available for 177 children.

Demographics		Intervention N=96 N (%)	Control N=162 N (%)	P Value
Age in Months	Mean (s.d)	47 (6.46)	49 (5.84)	.01
	Gender			
	Boys	69 (72)	90 (56)	.01
	Girls	27 (28)	72 (44)	
Race/Ethnicity		N=96	N=162	
	Hispanic	9 (8)	19 (14)	
	White	2 (2)	44 (33)	
	Black	89 (83)	58 (43)	
	Asian	(0)	2 (1)	
Other	7 (7)	12 (9)		

Child Weight Status at Baseline

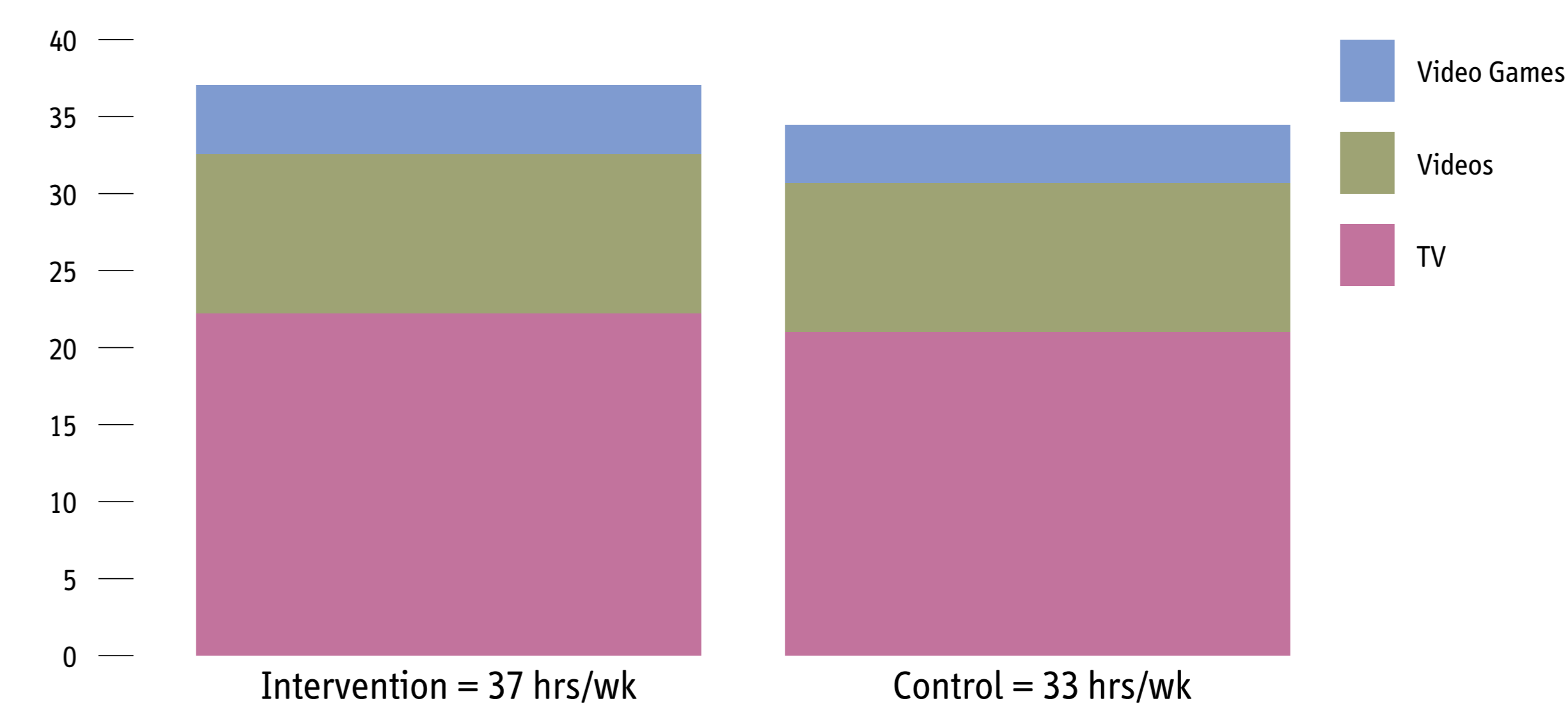


TV Viewing and Physical Activity

TV Viewing and Physical Activity		Intervention N=103	Control N=131	P Value
Child Behaviors	TV in Child's Bedroom [N (%)]	70 (68)	82 (63)	0.39
	Dinner w TV - days/wk. (s.d.)	2.41 (2.68)	2.14 (2.44)	0.42
	Family Dinner - days/wk. (s.d.)	5.31 (1.93)	5.76 (1.56)	0.05
Activity – hours/wk. (s.d.)		N=83	N=108	
	Moderate	20 (16.15)	22 (18.50)	0.38
	Vigorous	N=79 28 (18.58)	N=113 27 (19.07)	0.81



Child Media Viewing - Hours per Week



Children from intervention and control sites averaged 5 hours of viewing per day.

Curricula Implementation

- Thirty-eight of 40 teachers and assistant teachers (95%) participated in at least one 6-hour, SPARK-EC training; 65% participated in two trainings.
- SPARK-EC implementation questionnaires were obtained from 6 of 10 intervention site teachers:
 - All teachers reported SPARK-EC lessons that averaged over 15 minutes in duration.
 - A third of teachers delivered SPARK-EC lessons three or more days per week.
 - Half the teachers conducted SPARK-EC lessons for at least 45 cumulative minutes per week.



- Fifteen of 18 teachers (83%) participated in the half-day training for the *Fit 5 Kid's Reduction of TV Viewing Preschool Curriculum*.
- Teachers from 9 of 10 intervention classrooms returned the curriculum questionnaire for each of the seven weeks.
- On average, teachers implemented 62% of the *Fit 5 Kids* lessons.



TV-Turnoff Week with the Berenstain Bears.

Conclusion

The study population was a high-risk minority population with very high rates of overweight and obesity (41%), and excessive hours of media viewing. The intervention built on the strengths of a program, present in all states, serving a low-income population at increased risk of overweight/obesity. Through a partnership, Head Start implemented interventions that support the program's existing child development objectives, and enhance program capacity to modify behaviors associated with obesity.

