

Title of Intervention	The CHILDREN Study: School based program.	
Intervention Strategies	Environment and Policies, Group Education	
Purpose	"Overcoming the barriers in accessing physical activity areas, increasing the availability of fruits and vegetables and increasing parental" support in 5th graders to decrease obesity and blood pressure.	
Populations	5th graders in Greece.	
Settings	School-based	
Partners	Not mentioned	
Intervention Description	A 12 month intervention program integrated with existing curriculum, primarily with Physical Education and science courses. 'The themes covered were self-esteem, body image, nutrition, physical activity, fitness, and environmental issues. The material was implemented for 1–2 hours per week.' 'Several motivational methods and strategies were used for increasing knowledge, increasing skills and self efficacy, achieving better self-monitoring, changing attitudes and beliefs, and changing social influence.' Take home activities encouraged parent support. The physical activity component consisted of 2, 45 minute physical education session weekly conducted on the playground. The sessions focused on enjoyment and fitness conducted at a moderate intensity. School environment changes were implemented to support the intervention including: opening access to the playground during after school hours and increasing availability of health foods while decreasing less healthy choices.	
Theory	Ecological Model, Theory of Planned Behavior.	
Resources required	Staff/Volunteers:	Regular teaching staff.
	Training:	Yes, length not mentioned.
	Technology:	None
	Space:	School facilities including play area.
	Budget:	Not mentioned
	Intervention:	Student's workbook and a teacher's manual with reproducible exercises.
	Evaluation	Digital scale, portable commercial stadiometer, EpiInfo software, automated sphygmomanometer, 24 hour dietary recall, and standardized questionnaire for physical activity.
Evaluation	Design:	Group Random Controlled Trial.

	Methods and Measures:	Schools in Ioannina, Greece were randomly assigned to either intervention or control groups. Based on the outcome of the Theory of Planned Behavior questionnaire, the intervention focused on overcoming the barriers in accessing physical activity areas, increasing the availability of fruits and vegetables, and increasing parental support. General linear mixed model and mediating variable analysis were used to evaluate the differences between the two groups and to test whether changes in certain dietary, physical activity and anthropometrical indices mediated the effect of the intervention on blood pressure. Measures included: BMI, 24 hour food recall, and physical activity assessment.
Outcomes	Short term impact:	The 'intervention group had higher consumption of fruits and lower consumption of fats/oils and sweets/beverages compared with the control group' post intervention.
	Long term impact:	"The findings indicate favorable changes in blood pressure and obesity indices after the implementation of a 1-year school-based intervention"
Maintenance	Not mentioned	
Lessons Learned	The 'results highlight the importance of developing a social and physical environment that promotes balanced eating behaviors and extra-curricular access to physical activity venues.'	
	'The positive changes observed in this study could be mainly attributed to the systematic approach used, as it was based on the results of the Theory of Planned Behavior questionnaires and could therefore address children's actual needs, attitudes and perceived barriers.'	
Citation(s)	Angelopoulos, P.D., Milionis, H.J., Grammatikaki, E., Moschonis, G., and Manios, Y. (2009). Changes in BMI and blood pressure after a school based intervention: The CHILDREN study. European Journal of Public Health, 19(3), 319-25.	