**Evidence Table 9. Description of the interventions used in school settings with a home component**

| **Author, year** | **Arm** | **Description** | **Psychosocial Dietary Intervention** | **Physical/environ-mental Dietary Intervention** | **Psychosocial physical activity/ Exercise Intervention** | **Physical/environmental Physical Activity/ Exercise Intervention** | **Decrease Sedentary Behavior Intervention** | **Other Interventions** | **General Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Burke, 19981 | 2 | WASPAN program only  Length of intervention, weeks: NR  Setting:  School: Classroom lessons on physical activity and nutrition; physical activity sessions  Home: Home-based nutritional program for children and their families. | Aimed to improve children’s diets by prompting families to review their diets, reducing consumption of fat, sugar, and salt, increasing fiber intake, and creating links between home and school for health promotion. The nutrition program is built around four comic books in which two space creatures must discover the dietary habits of humans. It includes a Teachers’ Handbook, Home-based Mission Booklet, Class Activities Booklet, Incentives, and a Recipe Booklet that presents recipes written for children by children. Home-based Missions and Class Activities are combined in activities such as planning a week’s grocery shopping on the basis of advertised prices and in learning strategies to resist peer pressure. The Incentives Booklet includes a progress chart, stickers, and a completion certificate to encourage participation from children and parents.  Target: Child  Family  Delivery: Teacher  Duration: Duration (e.g., length of educational or counseling sessions): Aim was 1 hour per week  Other: Actual duration: 45 to 50 minutes /week in 21%, 60 minutes in 73%, and 90 to 105 minutes in 5%. |  | The WASPAN physical education program consisted of six classroom lessons to establish a rationale plus physical activity sessions (see below)  Target: Child  Delivery: Teacher  Duration: Four fitness sessions a week  Other: Actual duration and frequency: Overall, 37% of sessions lasted 15 minutes, 55% lasted 20minutes and 8% lasted 25 minutes with three sessions per week in 24%, 4 in42%, and 5 in 34%. | Innovative 20 minute fitness sessions daily by means of small group activities that allowed for the individual fitness levels and provided a range of options by means of progression through graded activities.  Target: Child  Delivery: Teacher  Duration: 4 sessions per week  Other: Actual duration and frequency: 37% of sessions lasted 15 minutes, 55% lasted 20 minutes and 8% lasted 25 minutes with three sessions per week in 24%, 4 in 42%, and 5 in 34%. |  | Other: incentives/  motivations  Target: Child  Delivery: Researcher  Duration: Awards for each girl based on Kwanzaa principles; videotaped feedback allowing girls to teach each other and choreograph routines; opportunities for participant choice and control; and performances at public events. | The control group health education consisted of state-of-the-art, culturally tailored, authoritative, information based health education on nutrition, physical activity, and reducing cardiovascular and cancer risk. It included 24 monthly newsletters for the girls (“Felicia’s Healthy News Flash”) and their parents/guardians (“Stanford GEMS Health Report”) and quarterly community center health lectures (“Family Fun Nights”). The researchers used the same monitoring and incentive schedules included in the experimental treatment condition. |
| 3 | WASPAN plus physical education enrichment program (PEEP)  Length of intervention, weeks: NR  Setting: School: Classroom nutrition and physical activity lessons; physical education enrichment activities; physical fitness sessions  Home: Home-based nutritional program for children and family. | Aimed to improve children’s diets by prompting families to review their diets, reducing consumption of fat, sugar, and salt, increasing fiber intake, and creating links between home and school for health promotion. The nutrition program is built around four comic books in which two space creatures must discover the dietary habits of humans. It includes a Teachers’ Handbook, Home-based Mission Booklet, Class Activities Booklet, Incentives, and a Recipe Booklet that presents recipes written for children by children. Home-based Missions and Class Activities are combined in activities such as planning a week’s grocery shopping on the basis of advertised prices and in learning strategies to resist peer pressure. The Incentives Booklet includes a progress chart, stickers, and a completion certificate to encourage participation from children and parents.  Target: Child  Family  Delivery: Teacher  Duration: Duration (e.g., length of educational or counseling sessions): Aim: 1 hour per week  Other: Actual duration: 45 to 50 minutes/week in 21%, 60 minutes in 73%, and 90 to 105 minutes in 5%. |  | The WASPAN physical education program consisted of six classroom lessons to establish a rationale and activity sessions (below).  In addition to standard WASPAN program, Children kept regular, but not continuous, 7-day physical activity diaries, which were used by teachers to identify preferred activities and ways these might be increased in duration or frequency. Teachers and students worked together to establish goals and decide on how these might be attained. Targets were 10% to 30% above the current level and encompassed both duration and intensity of physical activity. Parents were asked to monitor completion of the diaries and to encourage increased levels of physical activity.  Target: Child  Family  Delivery: Teacher  Duration: Four fitness sessions a week  Other: Actual duration and frequency: Overall, 37% of sessions lasted 15 minutes, 55% lasted 20minutes and 8% lasted 25 minutes with three sessions per week in 24%, 4 in42%, and 5 in 34%. | Innovative 20 minute fitness sessions daily by means of small group activities that allowed for the individual fitness levels and provided a range of options by means of progression through graded activities.  Target: Child  Delivery: Teacher  Duration: Duration (e.g., time in minutes/ session)  Aim: 4 sessions per week  Other: Actual duration and frequency: 37% of sessions lasted 15 minutes, 55% lasted 20 minutes and 8% lasted 25 minutes with three sessions per week in 24%, 4 in 42%, and 5 in 34%. |  |  |  |
| Caballero, 20032 | 2 | Pathways intervention  Length of intervention, weeks: 12 weeks  Setting:  School: Classroom curriculum  Home: Family involvement | Classroom curriculum; Promote healthful eating behaviors and increased physical activity, Integrate social learning constructs with American Indian traditions.  Target: Child  Delivery: Teacher  Duration: Duration (e.g., length of educational or counseling sessions): 45 minutes  Frequency (e.g., number of sessions per week): twice weekly | Pathways guidelines for food-service personnel; Regular visit by Pathways nutritionist to support and monitor school-lunch preparation, Reduce percentage of energy from fat to <30%. Introduce dietary practices aimed at increasing the use of lower-fat foods and fruit and vegetables  Target: Child  Educator  Other: food-service personnel  Delivery: Researcher  Duration: Change in intake (e.g., increased fruit and vegetable intake; decrease fat intake): Reduce percentage of energy from fat to <30%. | Physical education; to Increase energy expenditure, Encourage moderate-to-high amounts of physical activity in all children, Promote practice of health-related physical activity during and after school.  Target: Child  Delivery: Teacher  Duration: 30 minutes  Frequency (e.g., number of sessions per week): 3 sessions per week |  | Other: Family |  |  |
| Coleman, 20053 | 2 | El Paso CATCH  Length of intervention, weeks: Not clear  Setting: School: classroom and school wide Physical education and cafeteria component  Home: Plus Home Team component | Classroom curriculum component (Eat Smart?) (described in detail elsewhere)  Target: Child  Delivery: Teacher | Cafeteria component (described in detail elsewhere)  Target: Child  Delivery: Other: Food service staff (trained by the members of the original CATCH program) | Classroom curriculum component (described in detail elsewhere)  Target: Child  Delivery: Teacher | Physical Education component(described in detail elsewhere)  Target: Child  Delivery: Teacher  Other: PE teachers | Other: Home Team component (described in detail elsewhere) |  |  |
| Danielzik, 20074 | 2 | Nutrition and activity curriculum  Length of intervention, weeks: 2-3 weeks  Setting:  School: Nutrition and activity curriculum | Behavioral and educational messages; eat fruit and vegetable every day and reduce intake of high-fat foods. Messages were conveyed by use of nutrition fairy tales, interactive games as well as by preparing a healthy breakfast.  Target: Child  Parent/Caregiver  Educator  Delivery:  Other: Skilled nutritionist  Duration: 6 hours |  | Behavioral and educational messages; keep active at least 1 h/d, and decrease television consumption to 1 h/d. After each unit, running games were offered for 20 min on the school yard.  Target: Child  Parent/Caregiver  Educator  Delivery: Teacher  Duration: 6 hours |  | Other: parental involvement and training of teachers |  |  |
| Dzewaltowski, 20106 | 2 | HOP’N after school  Length of intervention, weeks:  Setting: School | Targeting Educators: To assist the program staff, the research team provided a list of healthy snack ideas and content expertise for after-school snacks.  Targeting children: HOP’N Club was a weekly social-cognitive-theory based curriculum. The curriculum was organized in a notebook form with weekly modules that included learning objectives, behavior change strategy goals, and implementation procedures and scripts. The HOP’N Club child behavioral goals were: eat FV at every meal or snack; drink less soda and juice drinks (drink water, no more than 1 can of soda or small cup daily);  Target: Child  Educator  Delivery: Researcher  Teacher | Every day, staff had the goal to work with their school’s food service to provide FV with every snack.  Target: Educator  Delivery: Researcher | Targeting children: HOP’N Club was a weekly social-cognitive-theory based curriculum. The curriculum was organized in a notebook form with weekly modules that included learning objectives, behavior change strategy goals, and implementation procedures and scripts. The HOP’N Club child behavioral goals were: Be physically active every day (30 minutes after-school, 60 minutes daily).  Target: Child  Delivery: Teacher | Every day, staff had the goal to implement 30 minutes of organized PA following the CATCH Kids Club PA principles. The project provided the CATCH Kids Club curriculum box and PA equipment.  Target: Educator  Delivery: Researcher | Target: Teacher  Delivery: Through the HOP'N Club curriculum, children had the goal to cut back on TV and video games (no more than 2 hours a day; remove TV from the bedroom.  Other: Change in home environment. |  |  |
| Foster, 20087 | 2 | School Nutrition Policy Initiative (SNPI)  Length of intervention, weeks: NR  Setting:  School: (1) school self-assessment; (2) nutrition education; (3) nutrition policy; (4) social marketing; and (5) parent outreach.  Home: home meetings with family members  Policy: Yes | Classroom-based nutrition education.  The SNPI used several social marketing techniques to increase meal participation and consumption of healthy snack and beverage items. Students who purchased healthy snacks and beverages or who brought in snack items that met the nutritional standards from home or local stores received raffle tickets.  Student participated in a 2-1-5 challenge. (<2 hours of TV and video games per day; >1 hour of physical activity per day; >5 fruits and vegetables per day).  Parents were given nutritional education during parent-school meetings and discouraged to send sweets to teachers during holidays.  Schools assessed their environments and completed ratings on healthy eating and physical activity.   School staff in the intervention schools completed training on nutrition and physical activity.  Target: Child,  Parent/ Caregiver,  Other: schools; staff  Delivery: Researcher,  Teacher  Duration: 50 hours per student per school year of education was provided  Comment: staff received 10 hours per year of training. | Foods sold were changed to meet the following nutritional standards:"all of the beverages were limited to 100% juice (recommended 6-oz serving size), water (no portion limits), and low-fat milk (recommended 8-oz serving size). Snack standards allowed <7 g of total fat, 2 g of saturated fat, 360 mg of sodium, and 15 g of sugar per serving."  Reduction of unhealthy foods sold at parent fundraisers.  Target: Child  Parent/Caregiver  Delivery: Researcher  Other: Schools under the direction of the district's Food Service Division | Education demonstrating how physical activity is tied to personal behavior, individual health, and the environment.  Schools assessed their environments and completed ratings on healthy eating and physical activity.   School staff in the intervention schools completed training on nutrition and physical activity.  Target: Child  Other: schools; staff  Delivery: Researcher  Duration: provided 50 hours of education per student per school year  Comment: staff received 10 hours per year of training. | Student participated in a 2-1-5 challenge. (<2 hours of TV and video games per day; >1 hour of physical activity per day; >5 fruits and vegetables per day).  Target: Child  Delivery: Researcher | Target: Researcher  Delivery: Student participated in a 2-1-5 challenge which included <2 hours of TV and video games per day. | Goal setting  Target: Child  Delivery: Teacher  Duration: Booster sessions were introduced to reach a sustained increase in water consumption by giving quantitative targets and feedback. |  |
| Hatzis, 20108 | 2 | intervention  Length of intervention, weeks:  Setting: School: classroom-based instruction  Home: parents attended educational sessions as well. | NR here in detail; however, program was based on the "Know Your Body" education material with major modifications to the Mediterranean diet of Crete and the orthodox Christian church fasting rituals. Students were educated between grades 1-6 according to intervention principles about dietary issues among other health topics  Target: Child  Delivery: Teacher  Duration: Duration (e.g., length of educational or counseling sessions): health and nutritional components incorporated 13-17 hours of teaching over the academic year  Comment: Reference for the Know Your Body: Williams et al 1977 Primary prevention of chronic disease beginning in childhood. The "know your body" program: design of study. Prev Med 6, 344-357.  Walter and Wynder 1989 The development, implementation, evaluation and future directions of chronic disease prevention program for children: the "Know Your Body" studies. Prev Med 18, 59-71.  Arbeit et al 1992 The Heart Smart cardiovascular school health promotion: behavior correlates of risk factor change. Prev Med 21, 18-32. |  | NR here in detail; however, program was based on the "Know Your Body" education material with major modifications to the Mediterranean diet of Crete and the orthodox Christian church fasting rituals. Students were educated between grades 1-6 according to intervention principles about physical activity and fitness among other health topics  Target: Child  Delivery: Teacher  Duration: health and nutritional components incorporated 13-17 hours of teaching over the academic year |  | Other: Other health topics included alcohol overconsumption, smoking and accident prevention and generally health promotion |  |  |
| Hendy, 20119 | 2 | KCP group (LIONS)-received stars for 3 good health behaviors (1/8 cup FV; choosing low-fat and low-sugar drink and having 5000 exercise steps)  Length of intervention, weeks:  Setting: School: Earned stars during lunch for good health behaviors  Home: Earned stars if parents reported behaviors during 5 dinner meals at home per week. | Receive a star for eating 1/8 cup FV (‘‘the size of a ping pong ball’’) first during their meal (FVFIRST), choosing a low-fat and low sugar healthy drink (HDRINK).  Could earn extra stores if a parent reported behavior during dinner meals at home.  Target: Child  Delivery: Researcher |  | Receive a star for having 5000 exercise steps recorded on a pedometer (EXERCISE). |  |  | Other: statewide legislation to combat childhood obesity  Target: Child  Parent/Caregiver  Comment: BMI measurement, with confidential reports to parents; removal of vending machine access for all public elementary school students; public disclosure of vending contracts; creation of a state-level advisory committee to recommend physical activity and nutrition policy changes to the board of education; and creation of school district–level advisory committees to guide local policy implementation. |  |
| Hoelscher, 201010 | 2 | CATCH BP intervention  Length of intervention, weeks: 52 weeks  Setting: School: K-5 classroom curricula and a Physical education program, a child nutrition services component  Home: family involvement  Policy: Yes | To increase fruit and vegetable consumption; to decrease sugar-sweetened beverage consumption; to increase consumption of CATCH GO foods; and to encourage healthy meal patterns, such as breakfast consumption.  Target: Child  Delivery: Researcher |  | To increase moderate-to-vigorous Physical activity in students, in school PE and activity breaks as well as at home.  Target: Child  Delivery: Researcher |  | Target: Researcher  Delivery: To decrease sedentary activity, specifically television viewing.  Other: School involvement |  |  |
| 3 | CATCH BPC intervention  Length of intervention, weeks: 52 weeks  Setting: School: K-5 classroom curricula and a Physical education program, a child nutrition services component  Home: family involvement  Community or environment-level: community action team | To increase fruit and vegetable consumption; to decrease sugar-sweetened beverage consumption; to increase consumption of CATCH GO foods; and to encourage healthy meal patterns, such as breakfast consumption.  Target: Child  Delivery: Researcher | Menus implemented by schools included: providing opportunities for students to have a taste of healthful foods; implementation of school gardening programs; implementation of PA breaks during class time; and implementation of after-school PA programs.  Target: Child  Delivery: Researcher  Other: CATCH community action team | To increase moderate-to-vigorous Physical activity in students, in school PE and activity breaks as well as at home.  Target: Child  Delivery: Researcher |  | Target: Researcher  Delivery: To decrease sedentary activity, specifically television viewing.  Other: School involvement |  |  |
| Hollar, 201011 | 2 | HOPS intervention  Length of intervention, weeks: 68 weeks  Setting: School: School provided diet, classroom curricula, and physical activity during school day.  Policy: Yes | Nutrition educational activities; a multimedia set of materials highlighting especially nutrient-dense foods and healthful lifestyle habits were sent to intervention schools, including Foods of the Month (FoM) posters, tips for FoM tastings, FoM parent newsletter inserts, FoM activity packets, healthful lifestyle handouts, school gardening instructions, and other materials aligned with special programming such as National Heart Health Month, National Nutrition Month, and National School Breakfast and Lunch Weeks.  Target: Child  Delivery: Other: HOPS staff (including an RD), elementary school education experts and USDA Food and nutrition staff.  Duration: monthly | Consisted of rigorous modifications to school-provided breakfasts, lunches, and extended lunches, extended-day snacks in all intervention schools. Menus were modified to include more high-fiber items, such as whole grains, fresh fruits, and vegetables; fewer items with high-glycemic effects, such as high-sugar cereals and processed flour bakery goods; and lower amounts of total, saturated, and trans fats, thus modeling the nutrition messages being shared in classrooms reflecting the core tenets of the Dietary Guidelines for Americans, and in compliance with USDA NSLP guidelines.  Target: Child  Delivery: Other: Registered dietitian (RD) | The program included curricula on physical activity and other school-based wellness projects to teach children, their parents, teachers, and staff about good nutrition and the benefits of daily physical activity. The primary goal was to improve the health and academic achievement of children in a replicable and sustainable manner.  Target: Child  Delivery: Teacher | Schools were encouraged to implement daily physical activity in the classroom during regular teaching time. These desk side physical activities are matched with core academic areas such as spelling and math to encourage adoption of daily physical activity in addition to recess and physical education time. Schools also were asked to implement structured physical activity during recess time, as much as possible. Other physical activities, such as walking clubs, encouraged children and adults to walk before the start of each school day.  Target: Child  Delivery: Teacher  Duration: 10- to 15-minute  Frequency: daily |  |  |  |
| Hopper, 200512 | 2 | "Family fitness"  Length of intervention, weeks: 20 weeks  Setting: School: Classroom lessons on nutrition and exercise  Home: home activities for parents and children to complete | Classroom nutrition education emphasizing impact of nutrition on health, reading food labels, hands on activities, games, group discussion and role playing to encourage use of healthy foods. Children were also taught how to discuss nutritional topics at home with their parents and how to improve eating habits within the family.  Target: Child  Delivery: Teacher  Duration: 30 minutes  Frequency: two lessons per week. |  | Physical education instruction emphasizing the physical activity and fitness objectives specified in healthy people 2000.Lessons included cooperative activities and games with aerobic activity and other activities as walking and bicycling with parents.  Target: Child  Delivery: Teacher  Duration: 30 minutes  Frequency: three sessions per week |  | Other: home program |  |  |
| Jago, 201135 | 2 | HEALTHY intervention  Length of intervention, weeks: NR  Setting: School: focused on changes in school food quality, teacher-facilitated learning activities and a revised PE curriculum | to consume a healthier diet  Target: Child  Delivery: Teacher  Other: school  Duration: Five FLASH modules were implemented over five semesters. Each module delivered on a weekly basis  Comment: A program of peer-led, teacher-facilitated learning activities known as FLASH (Fun Learning Activities for Student Health) was introduced to foster self-awareness, knowledge, decision-making skills, and peer involvement for health behavior change.   A social marketing campaign that had a different theme for each semester of the intervention was also conducted different themes including water consumption, high-quality versus low quality food, energy balance, and life choices. Each theme was supported by branding, posters, and messaging that was prominently displayed and reinforced across the school. | To consume healthier diet  Target: Child  Delivery: School  Comment: Change in the total school food environment, with the nutritional quality of food and beverages provided during school breakfast and lunch periods improved. | to engage in increased physical activity  Target: Child  Delivery: Teacher  Other: school  Comment: A revised, more active, physical education (PE) curriculum was adopted. The PE curriculum was designed to facilitate higher student participation in the lessons and spend more time engaged in moderate to vigorous physical activity  (MVPA) during PE lessons.   A social marketing campaign that had a different theme for each semester of the intervention was also conducted with one of the themes encouraging physical activity instead of sedentary time. Theme was supported by branding, posters, and messaging that was prominently displayed and reinforced across the school. | to engage in increased physical activity  Target: Child  Delivery: Researcher  Other: teacher assistant  Comment: Schools also received around $10,000 of equipment and a teacher assistant to facilitate small group activities that were intended to increase activity time during the sessions. |  |  |  |
| Kriemler, 201013 | 2 | KISS  Length of intervention, weeks: 39  Setting: School: a school based stringent physical activity program  Home: “The children received daily physical activity homework of about 10 minutes’ duration prepared by the physical education teachers. This included aerobic, strength, or motor skill tasks such as brushing their teeth while standing on one leg, hopping up and down the stairs, rope jumping, or comparable activities. |  |  |  | The three compulsory weekly physical education lessons (45 minutes each) given by the usual classroom teachers (according to the specified curriculum), were supplemented with two additional weekly lessons (45 minutes each), which were taught mostly outdoors by physical education teachers. In addition, three to five short activity breaks (two to five minutes each) during academic lessons—comprising motor skill tasks such as jumping or balancing on one leg, power games, or coordinative tasks—were introduced every day. The children received daily physical activity homework of about 10 minutes’ duration prepared by the physical education teachers. This included aerobic, strength, or motor skill tasks such as brushing their teeth while standing on one leg, hopping up and down the stairs, rope jumping, or comparable activities.  Target: Child  Delivery: Teacher  Other: PE teacher  Duration: 45 minutes  Frequency: 5 per week. |  |  | The total 110 minute intervention consisted of 30 minutes homework/healthy snack time and 80 minutes of PA |
| Lionis, 199114 | 2 | Health Education Group  Length of intervention, weeks: 39  Setting: School: health education curriculum | Educational curriculum focused on nutrition, physical fitness and prevention of cigarette smoking.  Target: Child  Delivery: Teacher  Other: health team consisted of 1 doctor, 2 nurses and 2 social workers  Duration: 2 hour/session  Frequency:10 sessions/academic year  Comment: Teachers' guidebook and students' workbook entitled "Know Your Body" was the main educational aids. The main aim of the model was to enable students to recognize risk factors and resist the negative influences of the surrounding environment. Students' progress was monitored using a standardized questionnaire at the end of each session to see whether they understood the concepts. Other teaching materials including worksheets, videotapes, posters and health passports were available. Health passports contained results of the medical examination for each student. |  |  |  |  |  |  |
| Manios, 199815 | 2 | Intervention  Length of intervention, weeks: 156  Setting:  School: health education plus PA components. | Health and nutrition education  Target: Child  Parent/Caregiver  Delivery: Teacher  Duration: twice a year for parents  Other: 13-17 hrs of classroom material annually for children  Comment: provide children with workbooks and design teacher aids; provide parents screening results and presentations on the importance of topics relevant to children's dietary and exercise habits |  | Theoretical component of physical fitness and activity  Target: Child  Parent/Caregiver  Delivery: PE instructors  Duration: twice a year for parents  Other: 4-6 h of classroom material per year  Comment: Theory comprised of two parts: 1) that which follows screening and explains the tests and results, and 2)that which concentrates on intervention to improve fitness results through behavioral changes. Regarding the first part, explanations were offered in a simple, friendly way about the importance of the fitness and anthropometric tests in relation to being strong. Regarding the second part, self-improvement was emphasized to allow for success on a regular basis, and progression of skills and fitness scores identified for each grade to help ensure continual fitness development from year to year. | Practical component of physical fitness and activity  Target: Child  Delivery: PE instructors  Duration: 45 min/session  Frequency: two sessions per week  Comment: Practical aspects were delivered in the playground. Fitness-oriented exercise sessions were enjoyable, of moderate intensity and involved total classroom participation. All sessions, at the beginning, consisted of a short warm up period and stretching exercises. In the remainder of the time pupils were engaged in activities such as skipping, fitness stations and several aerobic group games. Less emphasis was placed on competition and winning and rewards were given for all levels of effort and ability. |  |  |  |
| Marcus, 200916 | 2 | Diet, physical activity (PA) and awareness  Length of intervention, weeks: Maximum: 208  Setting: School: Focus was to change the school environment, including school lunches, afternoon snacks, after school care activities and sports days.  Home: When celebrating birthdays, parents were asked not to provide these products at schools and after school care centers. Furthermore, parents of the children in the intervention schools were instructed not to supply sweetened drinks, sweets and other unhealthy products in the packed lunch during school excursions and sports days. |  | Dietary intervention: school lunch and afternoon snack. The teachers were instructed to encourage the children to increase the intake of vegetables during the school lunch. To facilitate this, all intervention schools had agreed to offer a variety of vegetables, and the food was arranged so that the children first served themselves vegetables and thereafter the main course. White bread was substituted with whole-grain bread or similar products including a high amount of dietary fibers. The sugar content in the school lunches and in the afternoon snacks was reduced by strategies such as replacing fruit yogurt with plain yogurt and eliminating fruit juices, soft drinks, lemonades and desserts. Whole-fat (3% fat content) or medium-fat (1.5% fat content) milk was substituted by skimmed milk (0.5% fat) and low-fat butter, cheese and yoghurt were provided. Sandwich ingredients were required to be low fat. Other aspects on food intake: Intervention schools were encouraged to eliminate sweets, sweet buns and ice cream in association with festivities. When celebrating birthdays, parents were asked not to provide these products at schools and after school care centers. Furthermore, parents of the children in the intervention schools were instructed not to supply sweetened drinks, sweets and other unhealthy products in the packed lunch during school excursions and sports days.  Target: Child  Parent/Caregiver  Educator  Delivery: The school  Change in intake (e.g., increased fruit and vegetable intake; decrease fat intake): Increase intake of vegetables; whole fat and low fat milk was substituted with skimmed milk and low-fat butter, cheese and yoghurt  Change in calorie intake: Sugar content was reduced by replacing fruit yoghurt with plain yoghurt and eliminating fruit juices, soft drinks, lemonades, and desserts.  Other: Intervention schools encourage eliminating sweets, buns, and ice cream associated with festivities. Parents were instructed not to pack sweet drinks or other sweets for school trips or sport days. |  | Intervention aimed at increasing the amount of PA by 30 min per child per day.  Target: Child  Delivery: Teacher  Duration: 30 min/PA sessions daily PA was integrated into the regular school curriculum  Frequency: Daily PA sessions. | Target: Teacher  Other: After school staff//Delivery: Children were not allowed to bring toys that might increase sedentary behavior, such as hand held computer games, to schools and after school care centers. The maximum time spent playing computer games at the after school care centers was restricted to 30 min per child per day.  Comment: Steps taken to increase awareness of the intervention. A STOPP newsletter distributed to parents and school staff. Also, research staff had meetings with the school personnel. School nurses received education in obesity-related problems. |  |  |
| Mihas, 201017 | 2 | Health and Nutrition Education  Length of intervention, weeks: 12  Setting: School | Each child was supplied with multi-component workbooks that covered mainly dietary issues, but also dental health hygiene and consumption attitudes. These books were aimed at improving children's diet and nutrition knowledge  Additionally; classroom modules for the children were designed to develop behavioral capability, expectations and self-efficacy for healthful eating and healthy foods selection. Learning activities for the classroom modules were designed to influence expectancies that placed an important value on achieving these behaviors. Several motivational methods and strategies were used for increasing skills and self-efficacy, achieving better self-monitoring, changing attitudes and beliefs and changing social influence. (Further information on these motivational methods and strategies is provided in the Comment box). Cues and reinforcing messages in the form of posters and displays were provided in the classroom.  Parental involvement:  (i) Meetings held with parents where they were given a file containing their child’s screening results. During the meetings, presentations on the importance of topics relevant to the dietary habits of children were issued to improve the health profile of the children and prevent the development of chronic diseases in the future. In addition, a special comment was made for each obese child, although his/her identity was not revealed for privacy reasons.   (ii) Parents were also encouraged to modify their dietary habits as well as those of their children. These meetings played an extra role: to facilitate parents’ participation and provide them with the opportunity to resolve any queries about their children’s health.  Target: Child  Parent/Caregiver  Delivery: Teacher  Duration: 12 hours of classroom material during 12 weeks for children; 2 meetings with parents, following the baseline examinations  Comment: Several motivational methods and strategies were used for increasing skills and self-efficacy (i.e. modeling, guided practice, enactment), achieving better self-monitoring (i.e. problem solving, goal setting), changing attitudes and beliefs (i.e. self reevaluation, environmental re-evaluation, arguments, modeling, direct experience) and changing social influence (i.e. modeling, mobilizing social support). |  |  |  | Goal setting |  |  |
| Nader, 199918 | 2 | CATCH intervention  Length of intervention, weeks: 156  Setting: School: school-based  Home: In some intervention schools, a family component. | NR in detail here, but article provides overview: "the CATCH intervention targeted consuming foods low in fat, saturated fat and sodium via a multicomponent program that included school environmental changes, a 3-year sequential classroom curriculum, and in some intervention schools, a family component.  Target: Child  Duration: 3 years  Comment: see reference for intervention design: Perry CL, Stone EJ, Parcel GS, et al. (1990) School-based cardiovascular health promotion: the child and adolescent trial for cardiovascular health (CATCH). J Sch Health 60:406-13. | NR in detail here, but article provides overview: "the CATCH intervention targeted consuming foods low in fat, saturated fat and sodium via a multicomponent program that included school environmental changes, a 3-year sequential classroom curriculum, and in some intervention schools, a family component.  Target: Child  Comment: as above, see reference for intervention design: Perry CL, Stone EJ, Parcel GS, et al. (1990) School-based cardiovascular health promotion: the child and adolescent trial for cardiovascular health (CATCH). J Sch Health 60:406-13. | NR in detail here, but article provides overview: "the CATCH intervention targeted increasing levels of physical activity via a multicomponent program that included school environmental changes, a 3-year sequential classroom curriculum, and in some intervention schools, a family component.  Target: Child  Comment: as above, see reference for intervention design: Perry CL, Stone EJ, Parcel GS, et al. (1990) School-based cardiovascular health promotion: the child and adolescent trial for cardiovascular health (CATCH). J Sch Health 60:406-13. | NR in detail here, but article provides overview: "the CATCH intervention targeted increasing levels of physical activity via a multicomponent program that included school environmental changes, a 3-year sequential classroom curriculum, and in some intervention schools, a family component.  Target: Child  Comment: as above, see reference for intervention design: Perry CL, Stone EJ, Parcel GS, et al. (1990) School-based cardiovascular health promotion: the child and adolescent trial for cardiovascular health (CATCH). J Sch Health 60:406-13. | Other: avoiding smoking initiation |  |  |
| Robinson, 199919 | 2 | The intervention was a 6-month classroom curriculum to reduce television, videotape, and video game use.  Length of intervention, weeks: 30 (7 months)  Setting: School: focus in the classroom  Home: Newsletters that were designed to motivate parents to help their children stay within their time budgets and that suggested strategies for limiting television, videotape, and video game use for the entire family were distributed to parents. | none | none |  |  | Target: Teacher  Delivery: 18 30-50 minute classroom-based lessons were given during the course of the 7 month intervention. They were administered by teachers, which were trained by research staff. lessons were on the following topics, which went along with a home-based component: early lessons focused on self-monitoring and self-reporting of TV, videotapes, and video games to motivate them to reduce use; a 10-day challenge to turn off the TV, videotapes and video games completely followed; and then after this, children were encouraged to use a 7 hour per week budget for TV, videotapes, and video games. Additional lessons included: how to be selective in their viewing and gaming and enlisting children to advocate for reducing media use. A parent component consisted of newsletters that were distributed to parents. These contained strategies on how to limit media use in the family and motivation for them to help their kids stay within the 7 hour budget. Each house also received an electronic TV time manager that would also work on the VCR. Families could request as many for their TVs as necessary. |  |  |
| Schetzina, 200920 | 2 | Winning with Wellness Pilot program  Length of intervention, weeks: 43  Setting: School: focused on classroom instruction, school health services, and removing soda from vending machines and physical education and activity  Home: newsletters and handouts sent home. | To promote behavior change via nutrition and health education in students and faculty and staff. To engage parents in promoting behavior change in students.  Target: Child  Parent/Caregiver  Educator  Delivery: Teacher  program staff  Comment: The nutrition component included a series of 4 interactive Go, Slow, and Whoa lesson plans developed by an East Tennessee State University registered dietician (RD). The Go, Slow, and Whoa program teaches students about how to make healthy food and beverage choices as part of a balanced eating plan. RD analyzed menus and made suggestions to the school food service coordinator about altering food preparation to decrease the fat content of items and replacing foods of low and minimal nutritive value with healthier options. During the second year of the program, program assistants from the county extension service provided in-class healthy snack preparation demonstrations using a mobile kitchen unit at classroom teachers’ request.  The health education component promoted healthy eating. It included 6 interactive lesson plans that promoted small changes in eating. Counseling and psychological services were also offered to help facilitate and guide the development and implementation of the winning with wellness program.  A wellness initiative for teachers and staff members included on-site lectures on health and wellness, discounted gym memberships, and free health screenings. In addition, the school administration encouraged teachers and staff to set their own goals for healthy eating and active living and organized a “biggest loser “program for teachers and staff interested in losing weight. Parents were encouraged to be present in the school cafeteria during lunch to assist students in making healthy food choices using the Go, Slow, and Whoa concept. | To promote healthier diet  Replacement of soda with water and fat-free milk or reduced-fat milk  Target: Child  Educator  Delivery: Teacher  school  Comment: the school administration began replacing soda in school vending machines with water and fat-free or reduced-fat milk. School guidelines were established for limiting the use of foods of low or minimal nutritive value for refreshments during classroom parties and for sale in school fundraisers. Parents were also asked to follow these guidelines when sending foods and drinks from home. Teachers were educated about avoiding the use of food as rewards and withholding physical activity as punishment. | To promote an active lifestyle  Target: Child  Educator  Delivery: Teacher  Comment: 6 interactive lesson plans designed to assist teachers teach the concept of energy balance and promote physical activity in conjunction with monitoring steps using a pedometer. | To promote physical activity during the school day  Target: Child  Educator  Delivery: Teacher  exercise specialist  Comment: To help promote physical activity during the school day, indoor and outdoor walking trails were established at the school by the administration through support of the Parent Teacher Organization. Teachers were also trained by an exercise specialist from the hospital to lead students in Move It Moments, which are 5-minute combinations of desk-side stretching, strengthening, and aerobic exercises. |  |  |  |
| Shofan, 201121 | 2 | The intervention focused on increased physical education and activity together with nutritional advice to the children and their families.  Length of intervention, weeks: 104 weeks  Setting: School: PE and nutritional advice. | During the 2 years of the program, the study group received 8 nutritional education lessons.  Target: Child  Delivery: Teacher  Directed by the Braun School of Public Health in cooperation with Ministry of Ed. |  |  | The intervention group received double the physical education hours as compared with the control group.  Target: Child  Delivery: This program was overseen by the Ministry of Education's inspectorate for Physical Education  Comment: We know that the normal PE classes were 2 45min lessons per week of medium intensity training with an estimated aerobic component of 25%, and that the study group received double the PE hours compared to the control group. | Other: Parent Meetings |  |  |
| Simon, 200822 | 2 | Intervention  Length of intervention, weeks: 208  Setting:  School: Education component focused on physical activity and sedentary behaviors; opportunities for physical activity were offered during school and during afterschool hours.  Home: Parents were asked to support the child's physical activity. |  |  | The intervention program came in addition to the standard school curriculum (which, in France, includes three 50-min physical education classes per week). The program included an educational component focusing on physical activity and sedentary behaviors.  Parents and educators were encouraged to provide support to enhance the adolescents’ physical activity level through regular meetings.  Target: Child  Parent/Caregiver  Educator  Delivery: Teacher | New opportunities for physical activity were offered at lunchtime, during breaks and afterschool hours, taking into account the obstacles to being active.   The activities, academic or less formal during breaks, were organized by physical educators without any restrictive competitive aspect. Enjoyment of participation was highlighted to help the less confident children to develop the competences needed to adopt an active lifestyle. Sporting events and ‘cycling to school’ days were organized.  Target: Child  Delivery: Teacher |  |  |  |
| Simonetti D'Arca, 198623 | 2 | Multi-media action school  Length of intervention, weeks: 52  Setting:  School: focused on educating staff, students and parents using media | to promote a healthier diet  Target: Child  Parent/Caregiver  Family  Educator  Delivery: Researcher  Comment: the dissemination of rules for correct diet and nutrition via printed material (illustrated pamphlets, memoranda, etc.), audiovisuals  (short films, slides, etc.), discussion meetings with families and teachers. |  |  |  |  | Other: within the "healthy living" focus of the program, theme 3: "Go feel good" was focused on healthy body image, self-esteem, and social responsibility. Students learned about valuing themselves and others based on who they and others are on the inside - addressed body-image, disordered eating issues (via teaching about healthy growth and development and media literacy). fitness loops were designed for all levels of fitness for healthy body image development.  Target: Child  Delivery: Teacher |  |
| 3 | Written action school  Length of intervention, weeks: 52  Setting:  School: focused on educating staff, students and parents using printed material only. | To promote a healthier diet  Target: Child  Parent/Caregiver  Family  Educator  Delivery: Researcher  Comment: the dissemination of rules for correct diet and nutrition via only printed material was distributed among pupils, teachers and families. |  |  |  |  |  |  |
| Speroni, 200724 | 2 | KLF intervention group  Length of intervention, weeks: 12  Setting:  School: after-school exercise and diet education program. | Dietary education presentations  Target: Child  Delivery: registered dietitians  Duration: 30 minutes/session  Frequency: 4 sessions in total  Comment: The first addressed best choice lunch selections. The purpose of identifying a best choice lunch was to expose the participants to thinking in terms of best lifestyle choices and making choices that are based on what is nutritiously best for them instead of momentary food desires. The dieticians also created best choice lunch menus for children who brought their lunch from home rather than buying the school lunch.  The second presentation the US Department of Agriculture food pyramid and serving sizes.  The third dietary education component was interactive portion distortion presentation. Calories were described in simple terms, showing side by-side comparisons of serving sizes 20 years ago versus serving sizes today. Students then guessed how long it would take to walk or ride a bike to burn the extra energy found in today’s larger serving sizes.  The final dietary presentation focused on making best choices at fast-food restaurants and summarized information from the previous three presentations. |  |  | Physical fitness activities to reinforce best lifestyle choices, weekly exercise  Target: Child  Delivery: A physical fitness trainer  Duration: 1 session/week  Other: 8 1-hr sessions and 4 30-min sessions  Comment: A physical fitness trainer led the participants in performing various types of physical fitness activities, such as aerobic dance, light strength training, stretching, balancing techniques, heart rate monitoring, yoga, and relaxation techniques. Best lifestyle choices were reinforced, encouraging participants to make best choices in selecting active behaviors such as running or cycling compared with being sedentary by viewing television or playing video games. The purpose of the exercise component was to help participants identify a variety of active behaviors they enjoyed and could conduct independently following the conclusion of the program. | Food diary | Food diary  Target: Child  Children completed diaries at baseline and at the end of the trial on drinks consumed over 3 days (2 weekdays, 1 weekend).  Comment: Diaries were done as part of outcome measures. |  |
| Trevino, 200425 | 2 | Health examination and school health program  Length of intervention, weeks: 30 weeks  Setting:  School: health behavior messages in classroom, school cafeteria, after-school care.  Home: reinforced at home and after school care. | Health behavior messages targeting decrease dietary saturated fat intake and increase dietary fiber intake. Bienestar school food service (includes an instructor’s manual and a Cafeteria staff workbook). The school food service promotes health food knowledge amongst staff and children. Family fun fiesta.  Target: Child  Delivery: Teacher  Other: parents, school Cafeteria staff, and after-school caretakers  Duration: 45 minutes  Frequency: Once a week, 50 sessions over 7months  Other: School food service sessions- one lesson per month lasting 30mins, One lesson per month; (8:15–8:45 AM) during staff break; lunch visits to persuade children are once a week. |  | Health behavior and physical activity class to increase physical activity in children and promote active lifestyle through 32 different physical activities.  Target: Child  Delivery: Teacher  Duration: 45mins/day  Frequency: 5day/week; 1day health education, 4day physical activities. | Bienestar health club (includes an instructor’s manual and a student’s workbook. Bienestar family fun fiesta (includes an instructor’s manual and a parent’s workbook).  Target: Child  Delivery: Teacher  Other: parents, school Cafeteria staff, and after-school caretakers  Duration: Club meeting; 1h/weekly after school.  Other: parent meetings; once every other month. | Goal setting  Other: Peer leading. |  |  |
| Story, 201226 | 2 | Bright Start  Length of Intervention (weeks): 45  Setting: School: physical activity sessions, nutritional lessons Home: goal to increase health awareness and better eating habits at home through motivational interventions | Family-focused intervention promoting healthy diet, proper nutrition, Specific behavioral messages for the family included eating more fruits and vegetables, substituting water for sugar-sweetened beverages, limiting high-fat and high-sugar snacks and fast foods, drinking skim or 1% milk.  Target: Child Parent/Caregiver Family:  Delivery: Teacher, trained staff  Frequency: three family event nights at the school during intervention period | School offered 1% white milk vs. whole or flavored, served recommended portion sizes, offer low-calorie/fat foods and provide more fruit and vegetables.  Target: Child:  Delivery: Cafeteria staff  Change in Intake: increased fruit/veggie intake and offer less fatty foods | Family-focused intervention promoting physical activity and reducing TV and video time.  Target: Parent/Caregiver Child Family  Delivery: Teacher, trained staff  Frequency: three family event nights at the school during intervention period | Class walks, in-class exercises (active movements and dance), active recess and school PE  Target: Child  Delivery: Teacher  Duration: 60 minutes total  Frequency: each day of intervention | Target: Child,  Delivery: Teacher  Comments: Reducing TV and video time. | Intervention: Goal setting, Family events  Target: Child, Family,  Delivery: Researcher, Teacher  Comments: Parents attending family nights set specific behavioral goals with trained staff regarding changes that could be made in the home environment to foster healthy eating and physical activity. Family events were held at the schools and included a meal for the family, several interactive and experiential station booths, and engaging physical activities designed to encourage home environment goals. They were also provided take-home incentives (e.g., magnets with behavioral messages,  refrigerator water dispenser, vegetable steamer, basketball,  jump rope, and fresh fruits/vegetables). Parents received motivational encouragement telephone calls. |  |
| Brandstetter, 201227 | 2 | URMEL-ICE  Length of Intervention (weeks): 38  Setting: School: Health promoting behavior change Home: family homework lessons, training and information of parents | Health promotion behavior change targeting drinking sugar-sweetened beverages. Drinking water instead of soft drinks, discovering "hidden" sugar in drinks.  Target: Child, Parent/Caregiver, Family:  Delivery: Teacher  Frequency: 29 teaching units each 30-60mins |  | Health promotion behavior change targeting physical activities, encouraging everyday physical activities and learning about local sports and leisure physical activities.  Target: Child  Delivery: Teacher,  Frequency: 29 teaching units each 30-60mins | 2 short blocks of physical activity exercises a day.  Target: Child  Delivery: Teacher  Duration: 5-7minutes per day | Target: Child,  Delivery: Teacher  Comments: Health promotion behavior change to reduce spending time with screen media and engaging in leisure activities without TV. | Intervention: Parental involvement  Comments: 6 family homework lessons  (tasks that cannot be accomplished by the child himself without the help of a parent) and materials for the training and information of the parents. |  |
| Llargues, 201128 | 2 | Education about food habits and physical activity  Length of Intervention (weeks): 104    Setting: School: 3h per week in classroom to develop activities related to health food habits and/or physical activity. This time was part of regular classes math, science, language, knowledge of the environment, developing posters, food tables, games, crafts, cooking workshops and promotion of games in the playground | Classroom education about dietary choices and recipes given out to try at home.  Target: Child , Family  Delivery: Teacher  Duration: 3hrs weekly split between diet and activity |  | Classroom education about activity and materials and games for break time.  Target: Child Family  Delivery: Teacher,  Duration: 3h weekly split between diet and activity |  |  | Intervention: family/home  Comments: During the study period, each family in the intervention group received monthly recipes for a balanced diet taking into account traditional food habits. The families also received a guide of the local areas and paths to exercise during weekends and books about balanced eating were recommended. |  |
| Lloyd, 201229 | 2 | Length of Intervention (weeks): 52    Setting: School: newsletters, plays, homework, assembly Home: multiple activities involving home and parents | Decrease in the consumption of sweetened fizzy drinks, an increase in the proportion of healthy snacks (HS) to unhealthy snacks consumed  Target: Child :  Delivery: Professional dancers/sportsmen  Duration: 1.5 in term 1; 2 hours in term 2  Frequency: 2 in term 1; 5 in term 2  Comments: Promote positive attitudes and norms towards healthy eating and physical activity through activity workshops. |  | Promote positive attitudes and norms towards healthy eating and physical activity through activity workshops.  Increase self-awareness and prioritize healthy goals. Consolidate social support  Target: Parent/Caregiver Child  Delivery: Professional dancers/sportsmen  Duration: 1.5  Frequency: 2 per semester |  | Target: Child  Delivery: Researcher, Teacher | Intervention: Goal setting, Social support; awareness  Target: Child, Parent/Caregiver,  Delivery: Researcher, Teacher  Comments: \*PSHE lessons (5) (morning) (1 h)  xDrama (5) (afternoon) (forum theatre; role play; food tasting, discussions, games, etc) (2 h), Goal setting sheet in Phase 3; goal setting interview in the summer term & Autumn 2 | Based on the Information,  Motivation and Behavioral Skills Model, 24 which proposes that adequate information, motivation and behavioral skills are essential to behavior change.  Uses highly inclusive and interactive drama activities, which are built around four characters (Disorganized Duncan, Football Freddie, Snacky Sam and Active Amy) with whom the children identify. During the Healthy Lifestyles Week (Phase 2), children work closely with the character most like them to help them to change their behaviors. In Phase 3, the children reflect on their own lifestyle behaviors around diet and activity and set simple goals with their parents. |
| Williamson, 201230 | 2 | Environmental modification  Length of Intervention (weeks): 121    Setting: School: change in food from school cafeterias and vending machines; PA in class, during recess and PE classes Home: newsletters sent home providing campaign-specific information | Providing campaign materials in the classroom, hallways, and other locations within the school via media (e.g., posters). The Cafeteria staff will be provided continuing education regarding proper cooking methods, serving correct portion sizes and limiting “seconds” of high fat foods.  Direct children to healthy food choices in the school cafeterias. The “Healthy Tip of the Day” will be recognized by the classroom teacher or cafeteria manager and communicated to the students prior to lunch. Family members will learn the same principles taught to the students through the primary prevention program at school. Bi-monthly newsletters will be sent home including MyPyramid refrigerator magnets and More Matters rulers. Furthermore, menus will be sent to parents  Target: Child ,  Family, Cafeteria staff  Delivery: Researcher, Cafeteria staff | Cafeteria staff in collaboration with research dieticians will increase the availability of fruits, vegetables, and whole grains. Altering presentation and recipes to increase appeal. Cafeteria staff will also be prompted to reduce the availability of foods with high dietary fat and sugar. Advertisement and consumption of soft drinks, candy, and fast foods will be limited and eventually eliminated. Foods available in vending machines will be modified  Target: Child Cafeteria staff  Delivery: Researcher, Cafeteria staff | Posters in the classroom that are designed to promote decreased sedentary behavior and increased physical activity. The Sports, Play and Active Recreation for Kids (SPARK) curriculum will be provided to support PE teachers. Family members will learn the same principles taught to the students through the primary prevention program at school  Target: Child Family Educator  Delivery: Teacher | Incorporating regular 5 minute physical activity breaks after 30 minutes of instruction, by engaging in educational activities that increase physical activity. Teachers are encouraged to increase physical activity during recess by provision of outdoor equipment supplied in PACs  Target: Child Educator  Delivery: Teacher |  |  | Interventions complex and duration/timing largely unspecified.  Info from the methods and design article |
| Williamson, 201230 | 3 | environmental program with an added classroom and internet education component  Length of Intervention (weeks): 121    Setting: School: change in food from school cafeterias and vending machines; PA in class, during recess and PE classes Home: newsletters sent home providing campaign-specific information Health Informatics: internet-based intervention | Arm 2+ weekly lessons on healthy eating that are delivered by designated teachers who are trained to deliver the intervention in professional development workshops. diet website access with a chat function  Target: Child  Family: Cafeteria staff  Delivery: Researcher, Teacher, Cafeteria staff  Frequency: 1 lessons on healthy eating and exercise | Arm2 Target: Child: Cafeteria staff  Delivery: Researcher, Cafeteria staff | Arm 2+ weekly lessons on exercise that are delivered by designated teachers who are trained to deliver the intervention in professional development workshops.  Target: Child, Family, Educator, Teacher  Frequency: 1 lessons on healthy eating and exercise | Arm2 Target: Child, Educator, Teacher: |  |  |  |
| Siegrist, 201131 | 2 | JuvenTUM    Setting: School: educate students, parents and teachers; alter school environments for diet and PA | As part of the monthly 3-part lessons, learned about healthy eating  Target: Child  Duration: 45 minutes per lesson  Frequency: Monthly  Comments: More power through healthy eating. Participate in fun and interesting games and solve riddles about healthy nutritional behaviors. | Measures were taken to improve the quality of food sold at school snack bars and school stores. | Teacher trainings (9 hrs total) were conducted with the objective of increasing their students’ physical activity during lessons and breaks and improving physical education within their schools.  Monthly three-part lessons: a warm-up of 10 min with running, playing running games at high intensity, 30 min exercises to improve body awareness and self-esteem with conversation in class about health-related topics, and 5 min relaxation exercises  Target: Parent/Caregiver, Child, Educator  Delivery: Researcher, Teacher  Duration: 45 minutes per lesson  Frequency: Monthly  Teacher training: 9 hours total  Comments: main topics for the 10 health-related themes: 1. Solve body riddles and play games to improve body awareness. 2. Perform fitness tests for cardiovascular fitness, coordination, flexibility, and muscle strength. 3. Observe and recognize breathing and heart rate while exercising at different intensities (running, walking, and rest). 4. Playing outside creatively. 5. Participate in sports to improve your well-being and to do even better in school. 6. Children present different sports to their classmates. 7. Step by step – fit. Assess activity over 3 days through the use of pedometers. 9. Strengthening the back, body awareness, and self-confidence. Juggle, balance, and perform circus games to improve posture and body awareness. 10. My body – through my senses. Solve riddles and play games using the senses of touch, smell, hearing, and  proprioception. | Measures were taken to arrange the classrooms, halls, and playgrounds in a way to promote more physical activity. |  |  | For further details about the program, visit http://www.juventum.med.tum.de |

BMI = Body Mass Index; CATCH = Coordinated Approach to Child Health; CATCH BP = Coordinated Approach to Child Health Basic Plus; CATCH BPC = CATCH BP and Community; CATCH GO = CATCH program foods labeled healthy foods; FLASH = Fun Learning Activities for Student Health; FV = Fruits and vegetables; FVFIRST = Fruits and vegetables first; GEMS = Girls health Enrichment Multi-site Studies; h/d = hours per day; HDRINK = Healthy Drinks first; Hrs = hours; Hrs = hours; KCP = Kid’s Choice Program; KISS = Kinder-Sportstudie; KLF = Kids Living Fit; MVPA = moderate to vigorous physical activity; NR = Not Reported; PA = Physical activity; PACs = Physical activity checklist; PE = Physical Education; PEEP = Physical Education Enrichment Program; PSHE = Personal, Social, and Health Education; RD = Registered Dietitian; SNPI = School Nutrition Policy Initiative; SPARK = Sports, Play and Active Recreation for Kids; TV = television; URMEL-ICE; VCR = Videocassette recorder; WASPAN = West Australian Schools Physical Activity and Nutrition Project