**Evidence Table 15. Description of the interventions used in school settings with home and community components**

| **Author, year** | **Arm** | **Description** | **Psychosocial dietary intervention** | **Physical/environ-mental dietary intervention** | **Psychosocial physical activity/ exercise intervention** | **Physical/environ-mental physical activity/ exercise intervention** | **Decrease sedentary behavior intervention** | **Other interventions** | **General Comments** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Angelopoulos, 20091 | 2 | The intervention consisted of a student workbook and teacher manual which covered themes related to self-esteem, body image, nutrition, physical activity, fitness and environmental issues.Length of intervention, weeks: 52Setting: School: Implemen-tation of a school-based curriculum.Home: Increasing parental involvement by increasing the availability of fruits and vegetables at home.Community or environment-level: Playgrounds and school yards were made accessible for children to play in. | An intervention material (student's workbook and teacher's manual) was developed and integrated into the existing school curriculum. The themes covered included self-esteem, body image, nutrition, physical activity, fitness and environmental issues.Several motivational methods and strategies were used for increasing knowledge (i.e.discussion, active learning, cues), 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 re-evaluation, environmentalre-evaluation, arguments, modeling, direct experience)and changing social influence (i.e. modeling, mobilizing social support).Target: ChildDelivery: TeacherDuration/frequency: 1-2 hours per week | The intervention focused on increasing parental involvement and availability of fruits and vegetables at home and school. School canteens were also obliged to have fresh fruit and freshly made juices. Fruit or vegetable bazaars were organized to increase familiarity and to provide parental and peer support for their consumption.Target: ChildParent/CaregiverFamilyDelivery: Teacher | An intervention material (student's workbook and teacher's manual) was developed and integrated into the existing school curriculum. The themes covered included self-esteem, body image, nutrition, physical activity, fitness and environmental issues.Several motivational methods and strategies were used for increasing knowledge (i.e.discussion, active learning, cues), 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 re-evaluation, environmentalre-evaluation, arguments, modeling, direct experience)and changing social influence (i.e. modeling, mobilizing social support).In addition, parental support was achieved via meetings at which parents were given a file containing the results of their child’s medical and nutritional assessment. Additionally, parents were advised to support their children in being physically active rather than to encourage sedentary behaviors. Some of the motivational methods used during these meetings were provision of feedback, reinforcement, discussion, persuasive communication, loss/gain frame.Target: ChildParent/CaregiverDelivery: TeacherDuration: 1-2 hours per week | Physical activity sessions, delivered in the playground, aimed at increasing children's fun and excitement for exercise. The sessions were enjoyable, fitness-oriented (rather than motor-oriented) and of moderate intensity. Little attention was placed on competition and winning while verbal rewards were given for all levels of effort and abilityApart from these sessions, playgrounds and school yards were accessible for children to play after the end of the curricular program, thus eliminating the factor mainly perceived as restrictive towards engagement in physical activity.Target: ChildDelivery: TeacherDuration: 45 minutes per session.Frequency: 2 sessions per week. Total of 60 classes per year |  |  | The intervention group included monthly family events alternated between nutrition and physical activity/contestsFor the intervention group, teachers and mothers participated in recipe selections, food preparations, and in the activities with the students. Health providers (e.g., dietitians) and educators from the Department of Education organized and facilitated participation in the nutritional and physical activity events in collaboration with the elementary school and the school’s faculty. |
| de Meij, 20103 | 2 | JUMP-inLength of intervention, weeks: 73 weeks (8 months year 1 and 9 months year 2)Setting: School, Home,Community or environment-level |  |  | Targeting child: ‘The Class Moves!’ Method (calendars) offering recurrent breaks for PA, relaxation and posture exercises, during regular lessons. For each grade, materials are adapted to the level of sensor–motor development. The aim is to make PA a daily habit, increase enjoyment of PA and contribute to a healthy sensor-motor development. (Not sure if this should be considered a psycho-social or environmental intervention).Targeting Parents: Parental information services Contains several options: information meetings, courses and sports activities for parents. To reach parents, multimedia instruments and a JUMP-in information movie are developed. Personal approach of parents from high-risk children is facilitated by the PFS. Existing structures such as language courses or coffee meetings are used to maximize attendance.Targeting parents and children: ‘This is your way to Move!’ Personal workbooks for children and their parents, with assignments to perform in class and at home, and an instruction-book for the school staff. The method is especially aimed at raising awareness of the importance of PA for health and at improving self-efficacy, social support, self-regulation and planning skills, of both children and parents.Target: ChildParent/CaregiverDelivery: ResearcherTeacher | School sports club: structural and easily accessible school sports activities are offered on a daily basis. During school hours, children get acquainted with a variety of sports. Subsequently, they can join the club during out-of-school hours. Existing local providers of physical activities and sports clubs are involved. A monitoring instrument yearly assessing and registering children’s level of PA, body mass index and motor skills. PFS facilitates referral to tailored interventions in a structured way, e.g., motor remedial teaching, physiotherapy and youth healthcare.Extra care for children at risk:Children detected by the PFS who have motor and movement disabilities or who experience hampering factors in their PA behavior (such as overweight), receive additional adapted physical education lessons (Club Extra) or motor remedial teaching, given by a qualified teacher. If necessary, parents of overweight or obese children receive an invitation for consultation from the youth healthcare or hospital.Target: Child  | Pedometer | Other: School involvementTarget: ChildOther: schoolsDelivery: ResearcherTeacherDuration: To increase school involvement, each school was required to appoint a CATCH Committee and CATCH Champion to guide site-level implementation decisions. CATCH training sessions for team members from each school; booster PE training sessions; a CATCH coordination kit providing “how-to” implementation instructions; awards ($2–5,000) for exemplary CATCH implementation; teacher-led activity breaks, which consisted of structured time during the week for PA and healtheducation, with activities adapted from the CATCH Kids Club; and social marketing strategies, which included morning messages,CATCH signage, and messages on school menus. | The addition of a communitypartner to the school-based CATCH Committee to form a “CATCHCommunity Action” team. CATCH Community Action teams were asked to: (i) Conduct a self-assessment using the CDC School Health Index to identify priority areas of action. (ii) Attend three “Best Practices” workshops per year with all CATCH BPC schools; and (iii) select an activity each semester from a “CATCH Community Café” menu of evidence-based strategies for promoting PA and healthy eating in the school setting. |
| Greening, 20114 | 2 | Monthly family events that alternated between nutrition and physical activities/contest. Health curriculum and intervention programLength of intervention, weeks: 34Setting: School: School-based (and for some components, also a family-based) intervention.Home : Family-based nutritional events (healthy tailgating recipe contest, supermarket sweep, health snack selection contest, holiday eating and activity log) and physical activity events (football toss contest, holiday activity log, softball throw contest, field day of various activities, including jump rope, hula hoops, football throws, and races.Community or environment-level: The school replaced the deep frying equipment with baking ovens. | Family- and school-based nutritional events on alternating months, including: (i) healthy tailgating recipe contest, (ii) supermarket sweep requiring parent and student to locate healthy, low-nonfat food ingredients for recipe (iii) healthy snack selection contest, and (iv) parent-child health holiday eating and activity log. Health education: Nutritional content of foods addressed in nutritional events. Portion sizes and eating in moderation addressed. Health benefits of the monthly physical activity events were provided during the activity.Target: Child,Parent/Caregiver,FamilyDelivery: TeacherOther: Health providers (e.g. dietitians and educators from the Department of Education.Duration: Duration (e.g., length of educational or counseling sessions): 34 weeksFrequency (e.g., number of sessions per week): Nutritional events were monthlyComment: Family and school-based nutritional events took place on alternating months. | Replaced deep frying equipment with baking ovens.Target: ChildDelivery: Other: Institution  | Family- and school-based physical activity events on alternating months including: (i) parent–child football toss contest, (ii) parent–child holiday activity log, (iii) parent–child softball throw contest, and (iv) field day of various activities including rope jumping, hula hoops, baseball throws, foot races.Target: ChildParent/CaregiverFamilyDelivery: TeacherDuration: 34 weeksFrequency: Monthly |  | Target: TeacherOther: Family Delivery: Family- and school-based physical activity events on alternating months including: (i) parent–child football toss contest, (ii) parent–child holiday activity log, (iii) parent–child softball throw contest, and (iv) field day of various activities including rope jumping, hula hoops, baseball throws, foot races.  | Goal settingTarget: ChildDelivery: TeacherComment: Booster sessions were introduced to reach a sustained increase in water consumption by giving quantitative targets and feedback. |  |
| Jansen, 20115 | 2 | Lekker Fit!Length of intervention, weeks: 39Setting: School : Intervention targets individual behaviors as well as school policies and curriculumHome : Parent Involvement (described in comments box)Community or environment-level : Local sports clubs were involved in providing some of the PE classes and PA activities outside of school hours. | A classroom component with three main lessons on healthy nutrition, active living and healthy lifestyle choices adapted for each grade. The lessons comprise a homework assignment, a theoretical part and a practical part, during which knowledge is applied in activities. The lessons finish with joint goal setting.Target: ChildDelivery: Teacher  |  | A classroom component with three main lessons on healthy nutrition, active living and healthy lifestyle choices adapted for each grade. The lessons comprise a homework assignment, a theoretical part and a practical part, during which knowledge is applied in activities. The lessons finish with joint goal setting.Target: ChildDelivery: Teacher  | Implementation of 3 PE sessions a week by PE teacher for grades 3 through 8.Target: ChildDelivery: PE teacherDuration: 3 | Target: Other: Local sports clubsDelivery: Organization of additional sport and play activities outside school hours which could be attended on a volunteer basis.Other: Additional components included: administration of the Eurofit test, provision of scorecards, and the offer of individual counseling if needed; health promotion gathering for parents and local sports clubs. |  |  |
| Sanigorski, 20086 | 2 | Community capacity-building program promoting healthy eating, physical activity and healthy weightLength of intervention, weeks: 156Setting: School: e.g. school nutrition policies, dietitians, after-school PA programs, walking school busesCommunity or environment-level : e.g. community gardens, fruit shops displays. | [i] One-off class sessions conducted by dietitiansii] Interactive, glossy, children’s newsletters (set of four 1600 copies of each newsletter distributed through the schools)iii] Teacher fliers (linking to children’s newsletters)vii)Parent tips sheets (set of 10)iv] Healthy lunchbox tip sheetsTarget: ChildParent/CaregiverFamilyEducatorCanteen staffDelivery: Dietician. Key organizations\* from Colac, Australia.  | i] School-appointed dietitian for supportii] School nutrition policies (including policies around water, fruit breaks,canteens, fundraising)iii] Canteen menu changes; lunch pack (healthy combos in designed packaging; 549 sold during the pilot period and remaining packs, about 4000, provided to schools for ongoing use)iv] Taste tests of new canteen menu itemsv] Fresh taste program (Melbourne Markets)vi] Healthy breakfast daysvii] Happy healthy families program (small groups, 6 weeks)vii] Community gardenix] Choice chips program (7 hot chip outlets in Colac)x] Fruit shop displays (3 shops involved)xi] Promotional materials (for example, balloons, stickers)Target: Child,Family,EducatorDelivery: Dietician. Key organizations\* from Colac, Australia.  | Promotional materials (for example, balloons, stickers)Target: ChildDelivery: Key organizations\* from Colac, Australia.  | i] After-school activities programii] Be Active Arts programiii] Walking school busesiv] Walk to school daysv] Sporting club coach trainingvi] Sporting club equipmentvii] Two class sets of pedometers for rotation between schoolsTarget: ChildEducatorDelivery: Key organizations\* from Colac, Australia.  | Target: Key organizations\* from Colac, Australia .Delivery: A "screen time" intervention component intended to limit TV viewing time. Screen time strategies included:i] TV power-down week, including a 2-week curriculumii] Interactive, glossy, children’s newsletters (series of five 1600 copies of each distributed thorough the schools)iii] Teacher fliers (linking to children’s newsletters).  | Other: Parent MeetingsTarget: Parent/CaregiverDelivery: Pediatrician and DietitianDuration: At regular parent meetings, which occurred once a month for one hour per session for 10 months a year, the pediatrician and dietitian encouraged health dietary habits. |  |
| Millar, 20117 | 2 | It's Your Move Project Length of Intervention (weeks): 156 wks. (3 yrs.) Setting: School: Variety of strategies delivered in school setting  | Use of social marketing to promote healthy beverages, healthy breakfasts, increased consumption of fruits and vegetables. Target: Child Delivery: School project officers and student ambassadors   | Distributed refillable water bottles, changed water policies, installed new water fountains, removed soft drinks from vending machines, introduced soup days and vegetable days, labeled school food based on healthiness, provided recipe books Target: Child Delivery: School project officers and student ambassadors  | Promoted active transport to and from school, increased participation in organized sports or other recreation, and provided education sessions regarding sports. Target: Child Delivery: School project officers and student ambassadors  | Introduced "riding to school program", started lunchtime and other walking groups, planned sports-related excursions Target: Child Delivery: School project officers and student ambassadors  |   | Intervention: Promoted acceptance of healthy body size and shape Target: Child Comments: School project officers and student ambassadors, Frequency and duration not reported | The intervention also involved capacity building among school project officers and student ambassadors through trainings, increasing awareness of project messages, evaluation, and professional development for physical education teachers, canteen staff training, and parent information. |
| Naul, 20128 | 2 | HCSC InterventionLength of Intervention (weeks): 208 Setting: School: multi-component program involving PA, nutritional lessons, etc. Home: Involvement of family, parents, and home life  | Monitor and teach healthier eating habits, class lessons, cooking classes, "school fruit events"Target: Child: Delivery: Teacher Frequency: 1hr/week  |   |   | Enhanced PA sessions and physical education, activities offered by afternoon session sports clubs, "walking bus" commute to school.Target: Child Delivery: TeacherDuration: 3hr/week in Germany, 2hr/week in Netherlands Comments: ultimate goal to achieve 60-90 minutes of PA per day. |  |   |  |
| De Coen, 20122 | 2 | Intervention based on the socio-ecological model in health promotion programs. Multi-topic intervention specifically based on 'Nutrition and physical Activity Health Targets' of the Flemish Community. Length of Intervention (weeks): 104 Setting: School: Focus in the classroom; emphasis on school PA and snack and beverage policy Home: The parents received a poster visualizing the target messages and containing short tips regarding parenting practices and styles to encourage children to stick to the healthy eating and PA targets Community: Each intervention year, information brochures and posters regarding the five topics of the project were distributed through general practitioners, pharmacists, social services and at relevant community events by the regional health boards and the research team.  | Through education to promote changes in daily consumption of water and decreasing soft drinks consumption; increasing daily milk consumption; increasing daily consumption of vegetables and fruit; decreasing daily consumption of sweets and savoury snacks. Target: Child, Parent/Caregiver, EducatorDelivery: Researcher TeacherDuration: implement five Healthy Weeks per intervention year (one for each cluster of topics) with a minimum 1 h of classroom time dedicated to the topic together with extracurricular activities Frequency: NR   |   | Through education to increase daily PA and decreasing screen-time behavior.Target: Child Delivery: Teacher Comments: All intervention schools were requested to i) implement five Healthy Weeks per intervention year (one for each cluster of topics) with a minimum 1 h of classroom timededicated to the topic together with extracurricular activities(e.g. during the vegetables and fruits week only fruitscould be brought to school as a snack; schools organizedfruit and vegetable tastings). | Development of an active playground and advice for parents to reduce screen-time behavior for their childrenTarget: Parent/Caregiver School Authority Delivery: Researcher  | Target: Child, Parent/ Caregiver Delivery: Teacher    | Intervention: CommunityComments: Community organizations, members of the city council, aldermen and local non-profit organizations working with children or health topics were approached to support the intervention at community level, to raise awareness and give greater publicity to the project. Each intervention year, information brochures and posters regarding the five topics of the project were distributedthrough general practitioners, pharmacists, socialservices and at relevant community events by the regional health boards and the research team. |  |
| Tomlin, 20129 | 2 | AS!BC intervention Length of Intervention (weeks): 28 Setting: School: classroom lessons on healthy eating and physical activity as well as extra PA sessions Home: Promote family events  | Integrated healthy eating education, focusing on fruit and vegetable consumption and a sugar sweetened beverage campaign Target: Child Delivery: Teacher,  Frequency: one healthy eating activity per month  |   |   | Increased physical activity sessions with recess and after-school activities and special class-room based PA sessions. In addition, extra playground equipment was provided Target: Child Delivery: TeacherFrequency: total 150 additional min of PA per week  |   |   |  |

AS!BC = “Action Schools! British Columbia”; HCSC = “Healthy Children in Sound Communities”; Hr = Hours; NR = Not Reported; PA = Physical Activity; PFS = Pupil Follow-up System; Yrs = years; CATCH = “Coordinated Approach to Child Health”; CDC = Center for Disease Control; PE = Physical Education