

	Study	Aim of the programme	Setting	Sports/activities	Theory base or framework	Participants	Programme length	Sessions	Session length	Frequency of sessions
3	Akelaitis and Malinauskas, 2016	Develop social skills (i.e. communication, cooperation, assertiveness, social self-control and social adaptation)	PE	Not specified	Not specified	9th grade high school students	8,75 hours	35	15 min	Not specified
4	Aksoy and Gürsel, 2017	Improving responsibility according to the 5 TPSR levels	PE	Ultimate Frisbee	TPSR in a framework of Kohlberg's moral development theory	9th grade vocational high school students	8 weeks	Not specified	40 min	2/week
5	Allen et al., 2015	Teaching life skills: teamwork, discipline, communication, concentration, persistence, goal-setting, self-confidence and positive self-talk	School sports	American football, martial arts, goalball, rock climbing, sprint hurdling, frisbee, boxing, football	PYD Life skill development and transfer	Underachieving boys aged 12 to 13	1 school year	23	75 min	1/week
6	Anderson-Butcher et al., 2013	Learning skills in various sport, fitness, and educational activities with a focus on health/wellness, drug/alcohol prevention, and social competence (specifically problem solving and assertiveness skills)	Summer programme	Volleyball, football, swimming, aerobics, soccer, track, basketball, wiffleball	Youth development and Life skill development	Boys and girls aged 9 to 16	4 weeks	20 days	5 hours/day	5/week

7	Anderson-Butcher et al., 2014	Fostering social competence (self-control, effort, teamwork and social responsibility), enhancing sense of belonging and connection to the programme, and increasing perceptions of sport competence	Summer programme	Basketball, football, lacrosse, health and fitness, soccer, social dance, softball, swimming	PYD, especially drawing from TPSR, Sports Education, initiative-building concepts, and best practices in youth development skills training	Disadvantaged boys and girls aged	4 weeks (19 days)	Not specified	4 hours/day 1h social skills play-based 3x1h sport + social skills	daily (19 days in 4 weeks)
8	Baena-Extremera et al., 2012	Promoting emotional, physical and social development	PE	Adventure activities (Challenge and adventure, Climbing techniques, Adventure games and sports)	Adventure Education	Boys and girls aged 15 to 16	9 weeks	18	Not specified	Not specified
9	Bean and Forneris, 2016	Teaching life skills	After-school sports	Not specified	PYD and life skill development	Boys and girls aged 9 to 18	2 to 9 months	Not specified	1 to 3 hours	Not specified
10	Bean, Whitley and Gould, 2014	Learn and demonstrate sports skills, be with their friends, and be physically active. Promoting the development of positive character and positive life skills. Helping young people grow into healthy adults.	After-school sports	Variety of sports teams, including, basketball, football, track and field, soccer, softball	PYD, life skill development and character development	Boys and girls aged 10 to 18, approx. half of youth living in poverty and are underserved	Long term with a minimum of 3 years	Not specified	Not specified	Not specified

13	Bruening, Dover and Clark, 2009	Teaching life skills, sports or PA and nutrition lessons	After-school sports	Traditional sports (e.g. basketball, track and field, non-traditional sports (e.g. field hockey, swimming, volleyball), other physical activities (e.g. double Dutch)	Based in theories of engagement and free-choice learning	Preadolescent girls of colour aged 9 to 13	24 weeks	Not specified	2 hours	2/week
15	Burnett, 2015	Providing opportunities for regular running to improve learners' fitness and health levels, with broader outcomes associated with life-skill education	School sports	Running	The ecological systems theory (as proposed by Bronfenbrenner, 1979) Life skill education sport-for-development	6th grade boys and girls, living in poverty	Not specified	Not specified	Not specified	3/week
20	Choi et al., 2015	To develop youth life skills such as personal skills (e.g. goal-setting, life style management) and interpersonal skills (e.g. communication, social skills, conflict resolution)	After-school sports	During the physical activity time, the mentor introduced the sports skills of the day, such as badminton, table tennis, or soccer, and they played together	PYD and life skill development	Boys and girls (mentees) aged 10 to 12	9 months	30	Not specified	Not specified
22	Cryan and Martinek, 2017	Teaching concepts such as respect, self-control, and teamwork	After-school sports	Soccer	TPSR and youth development	Low-income middle school boys aged 11 to 12 who exhibit risk behaviours	9 weeks	10	2 hours	2/week

23	DeBate and Bleck, 2016	To address developmental assets commonly addressed in sport-based PYD programmes (e.g. character, competence, confidence, connection, and caring)	After-school sports	Running	PYD	3rd to 5th grade girls	12 weeks	24	90 min	Not specified
24	Draper and Coalter, 2016	Combining soccer and the teaching of life skills (i.e. leadership, problem solving, health education, team work, goal-setting, values, self-awareness, time management, conflict management, interpersonal skills, decision-making, self-confidence, prioritizing, optimizing education)	After-school sports	Soccer	Bandura's social cognitive theory and life skills	Boys aged 11 to 20 from a community of low-income families in a deprived area	Not specified	Not specified	Not specified	2/week life skills 3/week soccer
25	Driska et al., 2017	Extending participants' boundaries mentally (mental coping skills. Teaching responsibility, accountability and hard work	Sports camp	Wrestling	Not specified	Boys and girls aged 14 to 18	88 hours of physical training and 13 hours of mental attitude talks	Not specified	Not specified	daily
26	Escartí et al., 2010a	Teaching responsibility through TPSR implementation (5 TPSR levels)	PE	Bat and field game, juggling, skating, and acrogym	PYD and TPSR	Boys and girls aged 11 to 12 from working-middle class families	1 school year	Not specified	60 min	2/week

27	Escartí et al., 2010b	Teaching responsibility through TPSR implementation (5 TPSR levels)	PE	Physical activities (e.g. gymnastics skills)	TPSR	Boys and girls aged 13 to 14, at risk of dropping out, from schools situated in low middle-class neighbourhoods	November - May of the school year	30	90 min	2/week
28	Ferguson and Shapiro, 2016	Enhancing social skills (taking turns, giving verbal compliments, giving physical compliments, making a positive postgame comment) and teaching sport skills (throw-ins, dribbling, passing, and wall volley)	Sports camp	Soccer	Not specified	Children aged 8 to 12 with social skills deficits	10 days over 2 consecutive weeks	8 training days	3 hours	daily
29	Fernández-Río and Suarez, 2016	Refine basic locomotor skills with a priority on safety. Working in small heterogenous cooperative groups to capitalize on learning.	PE	Basic locomotor skills and specific parkour skills	Cooperative learning	Boys and girls aged 11 to 12	12 lessons	12	55 min	Not specified
31	Folleto et al., 2016	Enhancing cognitive, social and motor development. Supporting the autonomy of children, personal and group achievements, and the active participation in decision-making during the learning process.	PE	Yoga	Not specified	Boys and girls aged 6 to 8	12 weeks	Not specified	45 min	2/week

34	Fuller et al., 2013	Promoting PYD and life skills (topics such as conflict resolution and peer pressure, with underlying themes of respect, responsibility, accountability, and leadership)	After-school sports	Both traditional (e.g. basketball and football) and culturally non-traditional (e.g. floor hockey and soccer) sports and other physical activities (e.g. capture the flag)	PYD and life skill development	Boys aged 10 to 14	24 weeks	Not specified	2 hours	2/week
35	García-Calvo et al., 2016	Promoting positive behaviour (discipline, tolerance and respect for classmates, sportsmanship, cooperation and teamwork, assessment of effort, self-control, and respect for norms and materials)	PE	Not specified	PYD, TPSR and SDT	Boys and girls aged 12 to 16	(1) 15 hours (training group) (2) 10 sessions (didactic unit group) (3) 15 hours (integral training group)	(1) 3 x 5 hours (2) 10 sessions (3) 3 x 5 hours	Not specified	Not specified
36	García-López and Gutiérrez, 2015	Promoting empathy and assertiveness	PE	Handball	Sport Education	Boys and girls aged 11 to 14 from middle-class backgrounds	18 sessions during second term	18	Not specified	2/week
37	Gordon, 2010	Implementation of the Responsibility Model	PE	Dance, gymnastics, touch rugby and minor games	TPSR	Boys and girls aged 13 to 15	6 months	Not specified	60 min	2/week

38	Gordon et al., 2016	Building life skills and developing personal and social responsibility	After-school sports	Not specified (sport and PA)	Social and emotional learning, TPSR, and Life skills	Disengaged boys aged 13 to 14	Over the course of two school years (September to May)	Not specified	75 min	biweekly
39	Gorucu, 2016	Developing social and communication skills	PE	Volleyball, table tennis and football	Cooperative learning	Secondary school senior year students	10 weeks	10	40 min	1/week
40	Goudas and Giannoudis, 2008	Promoting life skills (goal-setting, problem-solving strategies, and positive thinking) and teaching basketball and volleyball skills	PE	Basketball and volleyball	PYD and life skill development	6th year elementary and 2nd year junior high students from a middle-class area school	17 sessions	17	1 hour	Not specified
41	Goudas and Giannoudis, 2010	Teaching life skills: goal-setting, problem-solving strategies and positive thinking	PE	Basketball and volleyball	Life skill development	6th and 8th grade boys and girls	2 months (17 hours)	17	1 hour	3/week
42	Goudas and Magotsiou, 2009	Interacting with peers, solving problems cooperatively, helping peers and receiving help for goal accomplishment, meeting personal goals through cooperative play, following or leading a group depending on the circumstances	PE	Basketball, volleyball, and traditional Greek dancing	Cooperative learning and (partly) Sport Education	6th grade boys and girls	13-units	Not specified	45 min	3/week
44	Gülay et al., 2010	Cooperative games to enhance satisfaction from course, social interaction, and social communication. Encouraging cooperation, sharing, helping	PE	Cooperative games (e.g. Lion and Cow, Lemonade, Blanket Volleyball)	Cooperative games/learning	9th grade girls	12 weeks	12	80 min	1/week

behaviours, and creativity during the class.

46	Hardcastle et al., 2015	Promoting life skills, psychological skills, self-regulation skills and coping skills	After-school sports	Squash, softball, baseball, netball, triathlon, surfing	PYD and life skill development	High performance athletes aged 13 to 18	Not specified	Not specified	Not specified	Not specified
48	Harwood et al., 2015	Promoting behavioural responses associated with commitment, communication, concentration, control, and confidence	After-school sports	Soccer	5C's of PYD	Under-13 players at a professional soccer club academy	18 weeks (3 weeks baseline, 15 weeks intervention)	5 personal coach education sessions	Approx. 50 min	weekly
49	Hayden et al., 2012	Teaching responsibility	School sports	Physical activity: non-sport specific activities (e.g. strength building and athletic movement)	PYD and TPSR	Grade 9 - 12 boys and girls	Over the course of 1 school year	Not specified	1 hour	2/week
50	Hemphill and Richards, 2016	Promoting PYD and the transfer of positive skills outside the programme, particularly to the school context	After-school sports	Squash (single and double) and other PA	PYD and TPSR	6th to 8th grade youth	Over the course of 1 school year	Not specified	90 min squash and other PA 90 min of academic enrichment	3 to 5/week
51	Hodge et al., 2017	Teaching the core values of hockey (commitment, perseverance, and teamwork) and improving communication skills (meeting and greeting) and emotional health	After-school sports	Ice hockey	PYD and life skill development	Underserved boys and girls aged 7 to 15	11 weeks	11 lessons	60 min on-ice hockey practice 15 to 25 min off-ice education sessions	1/week

54	Koh et al., 2017	Promoting the school's four core values (i.e. integrity, resilience, commitment, and respect)	PE and sports	PE and school football and floorball	Kolb's (1984) experiential learning theory	6th grade students and athletes	10 weeks	Not specified	Not specified	Not specified
55	Koh et al., 2016	Promoting the school's four core values (i.e. integrity, resilience, commitment, and respect)	PE and sports	PE and school soccer and floorball	Kolb's (1984) experiential learning theory	Students and athletes aged 10 to 12	10 weeks	Not specified	Not specified	Not specified
56	Lang et al., 2016	Addressing basic knowledge about the development of stress and improving emotion- and problem-focused coping.	PE	Coping training and motor learning	Drawing on the experiential learning theory of Kolb (1984)	Vocational students	3 months	Not specified	90 min of which 20 min EPHECT	weekly
57	Lee et al., 2017	Teaching sport and life skills. Individual player skills (e.g. participation), team player skills (e.g. playing with and for others), competing player skills (e.g. playing against all odds), and thriving player skills (e.g. setting long-term goals)	After-school sports	Soccer	PYD and life skill development	4th to 5th grade boys and girls	12 weeks	Not specified	Not specified	Not specified
60	Luptáková and Antala, 2017	Collaborative learning (collaboration) and specific role/responsibility	PE	Not specified	Collaborative learning	Boys and girls aged 11 to 15	9 weeks	Not specified	Not specified	1/week
61	Malinauskas and Juodsnukis, 2017	Enhancing social responsibility (caring and helping, and respect)	School sports	Football	TPSR	Male football sport school students	14.58 hours during 1 school year	35	25 min	Not specified

65	Nathan et al., 2013	Promoting health and well-being, social inclusion, connectedness, and cross-cultural engagement.	After-school sports	Football	Social-ecological framework underlying the programme	Boys and girls aged 11 to 18 who had arrived in Australia as refugee or humanitarian entrants	10-week terms	Not specified	Not specified	Not specified
67	Newin et al., 2008	Promoting distinctiveness, team norms individual positions, interaction and communication, individual sacrifices while focusing on teamwork, organization, communication, and cooperation	After-school sports	Ice hockey and team-building (e.g. alphabet balance beam and the rope challenge)	The conceptual framework of team building developed by Carron and Spink (1993)	Ice hockey players aged 11 to 13	throughout the season	5	30 min	approximately every 3 weeks
68	Parise et al., 2015	Teaching game culture and values of rugby, tackling, passing the ball, support to the team mate	School sports	Rugby	Not specified	Boys and girls aged 11 to 15	3 months	Not specified	Not specified	1/week
69	Park et al., 2017	Adjusting to the new PA and movements involving body weight, tolerating full body-weight training and improving cardiopulmonary capacity, increasing cardiopulmonary capacity and maintaining their enhanced physical fitness levels.	PE	Not specified	Not specified	Boys and girls from multicultural families	8 weeks	Not specified	Not specified	Not specified

70	Riley and Anderson-Butcher, 2012	Promoting self-control, effort, teamwork, and social responsibility (primary outcomes), social competence (secondary outcome), and healthy youth development and overall child well-being (long term outcomes)	Summer camp	Sport activities and play-based education activity	PYD and TPSR	Boys and girls aged 11 to 13 from low-income families	19 days	Not specified	1h social competence education 3h sport enhanced with social competence instruction	daily
71	Riley et al., 2017	Fostering social competence	Summer camp	Basketball, football, health and fitness, lacrosse, soccer, social dance, softball, swimming, volleyball, and play-based education activities	PYD	Boys and girls aged 9 to 15, vulnerable youth, youth of colour and/or living in poverty	19 days	Not specified	6 hour/day	daily
72	Rodríguez et al., 2016	Reducing aggression and promoting prosocial values	After-school sports	Sport-recreational activities: football, basketball, athletics, wrestling and volleyball	Not specified	Male adolescents living in social risk	Not specified	25	1 hour	2/week
73	Salazar et al., 2016	Stimulate motor, cognitive, social and interpersonal skills	Summer camp	swimming, volleyball, basketball, aerial dance, tennis, indoor soccer, soccer, karate, flag football, recreational activities and handball	Life skill development	Boys and girls aged 6 to 16	5 weeks	Not specified	Not specified	Daily (Monday through Friday)

74	Schaillée, et al., 2017	Promoting PYD	After-school sports	Urban dance	PYD	Disadvantaged girls aged 11 to 19	Not specified (Participants had been enrolled for at least 1 year)	Not specified	Not specified	Varies from 1/week to more than 1 class/week
75	Senécal et al., 2008	Promoting team goal-setting	School sports	Basketball	Eys, Patterson, Loughead, and Carron's (2006) three-stage protocol for implementing a team goal-setting programme	Female high school senior basketball players aged 14 to 18	5-month regular season	Not specified	20 to 30 min	2 practices/week 1 game/week <i>Team goal-setting sessions occurred prior to the start of a practice.</i>
76	Sinelnikov and Hastie, 2008	Learning skills, participating in roles and fair play	PE	Basketball	Sport Education and Doyle's ecological paradigm (1977)	9th grade boys and girls, majority came from upper middle-class families	18 lessons	18	2 academic hours regular PE 1 elective period extra PE	2 academic hours/week regular PE 1/week elective period extra PE
77	Ullrich-French et al., 2012	To engage participants and develop life skills for academic, social, and physical domains (caring, respect, responsibility, trustworthiness, citizenship, and fairness). Promoting personal improvement and lifestyle activities.	Summer camp	Sports and other PA (e.g. swimming, fitness, and recreational games)	PYD	Low income boys and girls aged 9 to 16	4 weeks	Not specified	8 am to 2 pm	5 days/week

78	Vidoni and Ward, 2009	Fair play instruction ('give your best effort,' and 'be helpful, not harmful.')	PE	Tag Rugby	Sport Education and Fair Play Instruction	8th grade boys and girls	18 days	18	40 min	biweekly
79	Vierimaa et al., 2017	Emphasizing physical, social, and emotional development. Learning basketball skills, sportspersonship, and having fun.	After-school sports	Basketball	PYD, life skill development, and the Personal Assets Framework for Sport	Boys and girls aged 8 to 14, the league is accessible to a wide range of youth since it is located in a lower income neighbourhood	6-month season(s)	Not specified	45-min game	1 game/week
81	Walsh et al., 2010	To take responsibility for coaching themselves and for coaching and providing leadership for others in the programme, and transference of these responsibilities.	School sports	Basketball practice and game play	TPSR and life skills and transfer	Boys and girls aged 9 to 11 from a school located in a predominantly low-income and minority neighbourhood	2 consecutive school years	45	1 hour	1/week
82a	Weiss et al., 2016	Teaching life skills and enhancing core values	After-school sports	Golf	PYD	Boys and girls aged 10 to 17	Not specified in this article, see Weiss et al., 2013	Not specified	Not specified	Not specified
82b	(Study 2)	Teaching life skills and enhancing core values	After-school sports	Golf	PYD	Boys and girls aged 10 to 17 (Time 1)	At least 3 consecutive years of involvement in the programme	Not specified	Not specified	Not specified

83	Weiss et al., 2015	Improving health and fitness (e.g. reduce obesity risk), psychosocial attributes (e.g. self-perceptions), academic achievement, and behavioural conduct (e.g. fewer absences).	PE	Fitness curriculum focusing on motor skills, flexibility, speed, agility, strength, balance, coordination, endurance, and teamwork through individual circuits and tactical games)	PYD	Boys and girls aged 11 to 14	8 months during school year	Not specified	45 min	2/week (in addition to regular PE)
87	Wright and Burton, 2008	To teach self-control and participation, goal-setting, life skills. Stress reduction. Taking on responsibility.	PE	Tai Chi	Life skill development and TPSR	Students from a high school located in a neighbourhood with high rates of poverty.	10 weeks	20	Not specified	2/week
88	Wright et al., 2010	Teaching the 5 core goals	TPSR PE	Tai Chi	TPSR	Boys and girls aged 14 to 18, from a school that was on the state's failing list for achievement, graduation and attendance rates	18 lessons	18	1 hour	1/week
