

## Appendix 1. Sample Search Strategy

### PubMed

(Exercise\*[tiab] OR "Physical Activit\*" [tiab] OR (Activit\*[tiab] AND Physical[tiab]) OR (Exercise\*[tiab] AND Physical[tiab]) OR "Physical Exercise\*" [tiab] OR "Acute Exercise\*" [tiab] OR (Exercise\*[tiab] AND Acute[tiab]) OR (Exercise\*[tiab] AND Isometric[tiab]) OR "Isometric Exercise\*" [tiab] OR (Exercise\*[tiab] AND Aerobic[tiab]) OR "Aerobic Exercise\*" [tiab] OR (Exercise\*[tiab] AND Aerobic[tiab]) OR "Exercise Training\*" [tiab] OR (Training\*[tiab] AND Exercise[tiab]) OR (Behavior[tiab] AND Sedentary[tiab]) OR "Sedentary Behavior\*" [tiab] OR "Sedentary Lifestyle" [tiab] OR (Lifestyle[tiab] AND Sedentary[tiab]) OR "Physical Inactivity" [tiab] OR (Inactivity[tiab] AND Physical[tiab]) OR "Lack of Physical Activity" [tiab] OR "Sedentary Time" [tiab] OR "Sedentary Time\*" [tiab] OR (Time[tiab] AND Sedentary[tiab]))

(child[tiab] OR children[tiab] OR Adolescent\*[tiab] OR Adolescence[tiab] OR Teen\*[tiab] OR Teenager\*[tiab] OR Youth\*[tiab] OR (Adolescent\*[tiab] AND Female[tiab]) OR "Female Adolescent\*" [tiab] OR (Adolescent\*[tiab] AND Male[tiab]) OR "Male Adolescent\*" [tiab])

("Health polic\*" [tiab] OR "school health polic\*" [tiab] OR "health program" [tiab] OR "health plan" [tiab] OR "health regulation" [tiab] OR policy[tiab] OR policies[tiab])

(Exercise\*[tiab] OR "Physical Activit\*" [tiab] OR (Activit\*[tiab] AND Physical[tiab]) OR (Exercise\*[tiab] AND Physical[tiab]) OR "Physical Exercise\*" [tiab] OR "Acute Exercise\*" [tiab] OR (Exercise\*[tiab] AND Acute[tiab]) OR (Exercise\*[tiab] AND Isometric[tiab]) OR "Isometric Exercise\*" [tiab] OR (Exercise\*[tiab] AND Aerobic[tiab]) OR "Aerobic Exercise\*" [tiab] OR (Exercise\*[tiab] AND Aerobic[tiab]) OR "Exercise Training\*" [tiab] OR (Training\*[tiab] AND Exercise[tiab]) OR (Behavior[tiab] AND Sedentary[tiab]) OR "Sedentary Behavior\*" [tiab] OR "Sedentary Lifestyle" [tiab] OR (Lifestyle[tiab] AND Sedentary[tiab]) OR (Inactivity[tiab] AND Physical[tiab]) OR "Lack of Physical Activity" [tiab] OR "Sedentary Time" [tiab] OR "Sedentary Time\*" [tiab] OR (Time[tiab] AND Sedentary[tiab])) AND (child[tiab] OR children[tiab] OR Adolescent\*[tiab] OR Adolescence[tiab] OR Teen\*[tiab] OR Teenager\*[tiab] OR Youth\*[tiab] OR (Adolescent\*[tiab] AND Female[tiab]) OR "Female Adolescent\*" [tiab] OR (Adolescent\*[tiab] AND Male[tiab]) OR "Male Adolescent\*" [tiab]) AND ("Health polic\*" [tiab] OR "school health polic\*" [tiab] OR "health program" [tiab] OR "health plan" [tiab] OR "health regulation" [tiab] OR policy[tiab] OR policies[tiab])

### Web of science

TS=(Exercise\* OR "Physical Activit\*" OR (Activit\* AND Physical) OR (Exercise\* AND Physical) OR "Physical Exercise\*" OR "Acute Exercise\*" OR (Exercise\* AND Acute) OR (Exercise\* AND Isometric) OR "Isometric Exercise\*" OR (Exercise\* AND Aerobic) OR "Aerobic Exercise\*" OR (Exercise\* AND Aerobic) OR "Exercise Training\*" OR (Training\* AND Exercise) OR (Behavior AND Sedentary) OR "Sedentary Behavior\*" OR "Sedentary Lifestyle" OR (Lifestyle AND Sedentary) OR "Physical Inactivity" OR (Inactivity AND Physical) OR "Lack of Physical Activity" OR "Sedentary Time\*" OR (Time\* AND Sedentary)) AND TS=(child OR children OR Adolescent\* OR Adolescence OR Teen\* OR Teenager\* OR Youth\* OR (Adolescent\* AND Female) OR "Female Adolescent\*" OR (Adolescent\* AND Male) OR "Male Adolescent\*") AND TS=("Health polic\*" OR "school health polic\*" OR "health program" OR "health plan" OR "health regulation" OR policy OR policies)

### Proquest

TI,AB,SU(Exercise\* OR "Physical Activit\*" OR (Activit\* AND Physical) OR (Exercise\* AND Physical) OR "Physical Exercise\*" OR "Acute Exercise\*" OR (Exercise\* AND Acute) OR (Exercise\* AND Isometric) OR "Isometric Exercise\*" OR (Exercise\* AND Aerobic) OR "Aerobic Exercise\*" OR (Exercise\* AND Aerobic) OR "Exercise Training\*" OR (Training\* AND Exercise) OR (Behavior AND Sedentary) OR "Sedentary Behavior\*" OR "Sedentary Lifestyle" OR (Lifestyle AND Sedentary) OR "Physical Inactivity" OR (Inactivity AND Physical) OR "Lack of Physical Activity" OR "Sedentary Time\*" OR (Time\* AND Sedentary)) AND TI,AB,SU(child OR children OR Adolescent\* OR Adolescence OR Teen\* OR Teenager\* OR Youth\* OR (Adolescent\* AND Female) OR "Female Adolescent\*" OR (Adolescent\* AND Male) OR "Male Adolescent\*") AND TI,AB,SU("Health polic\*" OR "school health polic\*" OR "health program" OR "health plan" OR "health regulation" OR policy OR policies)

#### Science Direct

(Exercise OR "Physical Activity" OR "Sedentary Behavior" OR "Sedentary Lifestyle" OR "Physical Inactivity" OR "Lack of Physical Activity" OR "Sedentary Time") AND (child OR children OR Adolescent OR Adolescence OR Teen OR Teenager OR Youth OR "Female Adolescent" OR "Male Adolescent") AND ("Health policy" OR "school health policy" OR "health program" OR "health plan" OR "health regulation" OR policy OR policies)

#### Google scholar

(Exercise OR "Physical Activity" OR "Sedentary Behavior" OR "Sedentary Lifestyle" OR "Physical Inactivity" OR "Lack of Physical Activity" OR "Sedentary Time") AND (child OR children OR Adolescent OR Adolescence OR Teen OR Teenager OR Youth OR "Female Adolescent" OR "Male Adolescent") AND ("Health policy" OR "school health policy" OR "health program" OR "health plan" OR "health regulation" OR policy OR policies)

## Summary of Characteristics of Included Studies

First Author	Setting	Study type	name of program	Country	The main focus of the policy
Jiahui Dong (2023) (1)	school	survey	Physical Education Entrance Examination for Senior High School (PEESHS)	China	The policy of the Physical Education Entrance Examination for high schools is a part of the evaluation process for students' admission to high schools. This mandatory examination encourages students to take their physical activities and overall physical health seriously.
Piyawat Katewongsa (2023) (2)	school	quasi-experimental cohort	Active School Thailand	Thailand	This program is designed based on the whole-of-school approach and the implementation of strategies such as Active Policy, Active People, Active Place, Active Program, and Active Classroom.
Natasha H. Pedersen (2023) (3)	school	quasi-experimental	national school policy	Denmark	This program integrates 45 minutes of daily physical activity into school schedules through activities like games, movement, and workshops, supported by extending school hours
Erling Algroy (2022) (4)	school	survey	Obligatory physical activity scheme	Norway	This program adds 76 hours of physical activity beyond regular physical education to diversify students' routines and enhance their physical and mental health.

Kerli Moose s (5) (2021)	school	qualitativ e research	Schools in Motion (SiM)	Estonia	This program is an educational innovation aimed at developing and implementing practices to support the physical activity of students and teachers.
Kathryn Reilly (6) (2021)	After school	pragmatic longitudin al study	Active Kids program	Australia	Providing financial vouchers to students for structured physical activity programs not offered by schools.
Fernando Rodríguez- Rodríguez(7) (2020)	school	quasi- experime ntal study	“Integral Sports Schools” (EDI) program	Chile	This program aims to add diverse sports workshops, including individual and team sports, to the official school physical education curriculum.
Nicole K. Nathan (8) (2020)	school	cluster randomiz ed controlled trial	Student health and wellbeing policy	Australia	The well-being framework in schools encompasses cognitive, emotional, social, physical, and spiritual well-being. Physical well-being includes promoting physical activity, ensuring a secure environment, guaranteeing adequate nutrition and sleep, and embracing a whole-school approach.
Rachel Sutherland (9) (2020)	school	cluster randomis ed controlled trial	‘Physical Activity 4 Everyone’ (PA4E1)	Australia	The program is based on the Health Promoting Schools Framework by the World Health Organization, which includes education, environment, and partnerships.

Nina H. M. Bartelink (10) (2019)	school	quasi-experimental	'Healthy Primary School of the Future' (HPSF)	Netherlands	The program is based on the Health Promoting Schools Framework by the World Health Organization, which includes education, environment, and partnerships.
Ryan E. Rhodes (11) (2019)	home	randomized controlled trial	Canadian 24-Hour Movement Guidelines for Children and Youth	Canada	The program promotes an active lifestyle by balancing sleep, sedentary behaviors, and physical activities.
Katie A. Weatherson (12) (2018)	school	mixed-methods observational study	daily Physical Activity (DPA) policy	British Columbia	The program increases physical activity opportunities both in and out of the classroom, and beyond school hours.
Henna L. Haapala (13) (2017)	school	quasi-experimental	Finnish Schools on the Move program	Finland	The program focuses on developing an active culture, improving teaching, and encouraging physical activity.
Rachel L. Sutherland, (14) (2016)	school	cluster RCT	WHO's Health Promoting Schools framework	New England	The program is based on the Health Promoting Schools Framework by the World Health Organization, which includes education, environment, and partnerships.

D.H.H. Van Kann (15) (2016)	school	quasi-experimental	Active Living Project	Netherlands	The program targets physical activity in schools, active transportation, and active leisure time. Key components include school interventions, community engagement, and evaluation.
Michael W. Beets (16) (2016)	After School	randomized controlled trial	After School Physical Activity Guidelines	California	This program focuses on creating and implementing opportunities for physical activity after school hours.
Angie L. Craddock, ScD (17) (2014)	school	quasi-experimental study	physical education & physical activity policy	United States	This program includes state laws for curriculum standards, daily physical activity during school, before and after school activities, community engagement, guidelines on physical activity and punishment, and mechanisms for monitoring and support.
Kenneth R. Allison (18) (2014)	school	qualitative research	Daily Physical Activity (DPA) policy	Ontario, Canada	The program increases physical activity opportunities both in and out of the classroom, and beyond school hours.
MERLIN E. JURG (19) (2006)	school	pre-test/post-test control group	JUMP-in program	Holland	This program includes nutrition, physical activity, and outdoor recess play through the 'PLAYgrounds' intervention.

Evaluation Results of Article Quality

SCREENING QUESTIONS				2. RANDOMIZED CONTROLLED TRIALS				
First author	Year	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	2.1. Is randomization appropriately performed?	2.2. Are the groups comparable at baseline?	2.3. Are there complete outcome data?	2.4. Are outcome assessors blinded to the intervention provided?	2.5 Did the participants adhere to the assigned intervention?

Piyawat Katewongsa	2023	yes	yes	yes	yes	yes	yes	yes
Natascha H. Pedersen	2023	yes	yes	yes	yes	yes	yes	yes
Fernando Rodríguez-Rodríguez	2020	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Nicole K. Nathan	2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rachel Sutherland	2020	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nina H. M. Bartelink	2019	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Ryan E. Rhodes	2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Henna L. Haapala	2017	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Rachel L. Sutherland,	2016	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Michael W. Beets	2016	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Michael W. Beets	2015	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes

<b>SCREENING QUESTIONS</b>	<b>1. QUALITATIVE STUDIES</b>
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First author	Year	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	1.1. Is the qualitative approach appropriate to answer the research question?	1.2. Are the qualitative data collection methods adequate to address the research question?	1.3. Are the findings adequately derived from the data?	1.4. Is the interpretation of results sufficiently substantiated by data?	1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?
Kerli Mooses	2021	yes	yes	yes	yes	yes	yes	yes
Kenneth R. Allison	2014	Yes	Yes	Yes	Yes	Yes	Yes	Yes

SCREENING QUESTIONS				3. NON-RANDOMIZED STUDIES				
First author	Year	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	3.1. Are the participants representative of the target population?	3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?	3.3. Are there complete outcome data?	3.4. Are the confounders accounted for in the design and analysis?	3.5. During the study period, is the intervention administered (or exposure occurred) as intended?
Kathryn Reilly	2021	yes	yes	yes	yes	yes	yes	yes
Bridget C. Foley	2021	yes	yes	yes	yes	yes	yes	yes
D.H.H. Van Kann	2016	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell
Angie L. Cradock, ScD	2014	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell
MERLIN E. JURG	2006	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell

SCREENING QUESTIONS				4. QUANTITATIVE DESCRIPTIVE STUDIES				
First author	Year	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	4.1. Is the sampling strategy relevant to address the research question?	4.2. Is the sample representative of the target population?	4.3. Are the measurements appropriate?	4.4. Is the risk of nonresponse bias low?	4.5. Is the statistical analysis appropriate to answer the research question?
Jiahui Dong (2023)	2023	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes
Erling Algroy (2022)	2022	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes

SCREENING QUESTIONS				5. MIXED METHODS STUDIES				
First author	Year	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	5.1. Is there an adequate rationale for using a mixed methods design to address the research question?	5.2. Are the different components of the study effectively integrated to answer the research question?	5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?
Katie A. Weatherson	2018	Yes	Yes	Can't tell	Yes	Yes	Yes	Yes

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