Supplementary Material A. Search strategies.

MEDLINE

1. Physical Activity.mp.
2. exp Exercise/
3. exp Exercise Movement Techniques/
4. exp Exercise Therapy/
5. Physical Exertion/
6. Motor Activity/
7. exp "Physical Education and Training"/
8. exp Sports/
9. "Play and Playthings"/
10. (sport$ or bicycl$ or swim$ or walk$ or run$ or jog$).tw.
11. (physical$ adj2 activ$).tw.
12. (aerobic adj2 (train$ or active$)).tw.
13. or/1-12
14. limit 13 to ("preschool child (2 to 5 years)" or "child (6 to 12 years)" or "adolescent (13 to 18 years)"
15. 13 and (child* or adolescent*).mp.
16. 14 or 15
17. exp Monitoring, Physiologic/
18. exp Accelerometry/
19. (activPAL* or ActiGraph* or acceleromet* or heartrate monit* or heart rate monit* or pedomet* or armband* or arm band* or inclinomet*).tw.
20. (activity monitor* or activity tracker* or fitness tracker* or portable monitor* or wearable monitor* or Fitbit* or Vivofit* or Fuelband*).tw.
21. ((objectiv* adj3 measur*) or (direct* adj3 measure*)).tw.
22. or/17-21
23. 16 and 22
24. limit 23 to journal article
25. remove duplicates from 24
EMBASE

1. exp Physical Activity/
2. exp Exercise/
3. exp Kinesiotherapy/
4. exp Motor Activity/
5. Physical Education/
6. exp Disabled Sport/ or exp Sport/
7. Play/
8. (sport$ or bicycl$ or swim$ or walk$ or run$ or jog$).tw.
10. (aerobic adj2 (train$ or active$)).tw.
11. or/1-10
12. exp Physiologic Monitoring/
13. Accelerometer/ or Accelerometry/
14. (activPAL* or ActiGraph* or acceleromet* or heartrate monit* or hear rate monit* or pedomet* or armband* or arm band* or inclinomet*).tw.
15. (activity monitor* or activity tracker* or fitness tracker* or portable monitor* or wearable monitor* or Fitbit* or Vivofit* or Fuelband*).tw.
16. ((objectiv* adj3 measur*) or (direct* adj3 measure*)).tw.
17. or/12-16
18. 11 and 17
19. limit 18 to (preschool child <1 to 6 years> or school child <7 to 12 years> or adolescent <13 to 17 years>)
20. 18 and (child* or youth* or adolescent* or pediatric* or paediatric*).tw.
21. 19 or 20
22. limit 21 to embase
23. limit 22 to article
SportDiscus

( health* OR wellness OR well being OR wellbeing OR “quality of life” OR social behav* OR prosocial behav* OR behavio* conduct or conduct disorder* OR aggression OR delinquen* OR academic achievement OR educational achievement OR grade point average OR GPA OR drop out OR dropout OR attention or concentrat* OR psychomotor performance OR motor development OR motor skill* OR motor activit* OR movement OR physical competenc* OR physical* litera* OR postural balance OR depression OR depressive OR depressed OR mood disorder* OR anxiety OR distress OR worry OR burnout OR burn out OR psycho-social adjustment or psychosocial adjustment OR self esteem OR self concept OR (bone N2 density) OR (bone N2 mass) OR hypertens* OR high blood pressure OR cholesterol OR hypercholester* OR hyperlipid* OR dyslipid* OR lipids* OR lipoprotie* OR obese OR obesity OR overweight OR body mass index OR BMI OR waist OR adipos* OR fat OR metabolic syndrome OR insulin resistance OR diabet* OR glucose OR HBA1C OR fitness or physical condition* ) AND ( physiological monitor* OR DE "Patient Monitoring" OR DE "Patient Self-monitoring" OR (objective* N3 measur*) OR (direct* N3 measur*) OR activPAL* OR ActiGraph* OR acceleromet* OR heart rate monit* OR heart rate monit* OR pedomet* OR arm band* OR inclinomet or activity monitor* OR activity tracker* OR fitness tracker* OR portable monitor* OR wearable monitor* OR Fitbit* OR Vivofit* OR Fuelband* OR Actical OR Genea ) AND ( boy OR boys OR girl* OR child* OR schoolchild* OR adolescen* OR juvenil* OR youth* OR teen* OR pubescen* OR pediatric* OR paediatric* )
PsycINFO

1. exp Physical Activity/
2. exp Motor Performance/
3. Physical Fitness/
4. Energy Expenditure/
5. Activity Level/
6. Physical Education/
7. exp Sports/
8. Athletic Participation/
9. (sport$ or bicycl$ or swim$ or walk$ or run$ or jog$).tw.
10. (physical$ adj2 activ$).tw.
11. (aerobic adj2 (train$ or active$)).tw.
12. or/1-11
13. Monitoring/
14. (activPAL* or ActiGraph* or acceleromet* or heartrate monit* or heart rate monit* or pedomet* or armband* or arm band* or inclinomet*).tw.
15. (activity monitor* or activity tracker* or fitness tracker* or portable monitor* or wearable monitor* or Fitbit* or Vivofit* or Fuelband* or Actical or Genea).tw.
16. ((objectiv* adj3 measur*) or (direct* adj3 measur*)).tw.
17. or/13-16
18. 12 and 17
19. 18 and (child* or youth* or adolescent* or pediatric* or paediatric* or school age or pre-school).tw.
20. limit 18 to (160 preschool age or 180 school age or 200 adolescence )
21. 19 or 20
22. limit 21 to journal article