

#### **University of Huddersfield Repository**

Lewis, Kiara

Children and physical activity - why bother?

#### **Original Citation**

Lewis, Kiara (2017) Children and physical activity - why bother? In: Yorkshire Sport Foundation National Policy Seminar: Coping with reducing budgets: Improving attainment by improving pupil health, 27th April 2017, Cedar Court Hotel, Wakefield, UK. (Unpublished)

This version is available at http://eprints.hud.ac.uk/id/eprint/32375/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/

Dr Kiara Lewis Head of Division of Health and Wellbeing University of Huddersfield

# Children and physical activity – why bother?

## Why bother?

Benefits of being a physically active child

 Physical activity recommendations and current levels of activity

✓ How to engage children in physical activity



#### Physical benefits

#### Academic benefits

#### **Psychosocial**

## **Physical benefits**



- Less likely to be overweight
- ✓ Reduced CVD risk factors

#### Musculoskeletal benefits

## Academic benefits

The Effects of Physical Activity and Physical Fitness on Children's Achievement and Cognitive Out... Fedewa, Alicia L;Ahn, Soyeon Research Quarterly for Exercise and Sport; Sep 2011; 82, 3; ProQuest Education Journals pg. 521

Psychology

Research Quarterly for Exercise and Sport ©2011 by the American Aillance for Health, Physical Education, Recreation and Dance Vol. 82, No. 3, pp. 521–535

The Effects of Physical Activity and Physical Fitness on Children's Achievement and Cognitive Outcomes: A Meta-Analysis

Alicia L. Fedewa and Soyeon Ahn

It is common knowledge that physical activity leads to numerous health and psychological benefits. However, the relationship between children's physical activity and academic achievement has been debated in the literature. Some studies have found strong, positive relationships between physical activity and cognitive outcomes, while other studies have reported small, negative associations. This study was a comprehensive, quantitative synthesis of the literature, using a total of 59 studies from 1947 to 2009 for analysis. Results indicated a significant and positive effect of physical activity on children's achievement and cognitive outcomes, with aerobic exercise having the greatest effect. A number of moderator variables were also found to play a significant role in this relationship. Findings are discussed in light of improving children's academic performance and changing school-based policy.

- 59 studies, children aged 5-16
- Range of academic tests
- Experimental and crosssectional studies

## Results

- All physical activity programmes increased outcomes
- Aerobic exercise best
- Higher fitness, higher the results
- Highest in primary school

- Small group activities best
- >3 times a week better results
- Physically disabled and those with a learning difficulty improved most

## Psychosocial (potential)



- ✓ Reduced depression
- ✓ Reduced anxiety
- ✓ Increase self-esteem

## Children's views of P.E.:



# Children's views of adapted physical activity programme:



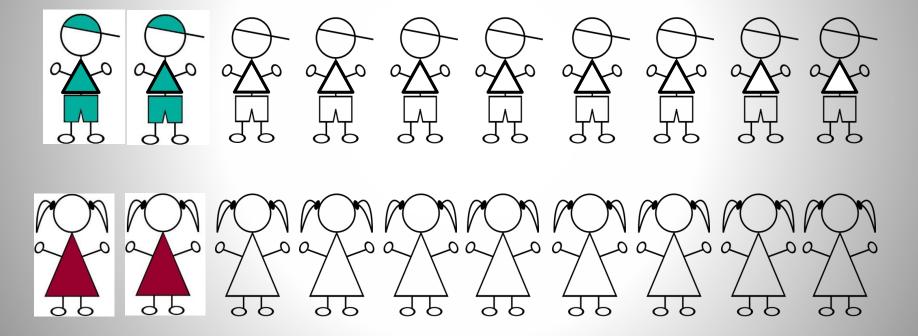




### Physical activity among children

Health Survey for England 2012

Around two in ten children aged 5-15 years meet the government recommendations\* for physical activity (boys 21%, girls 16%)

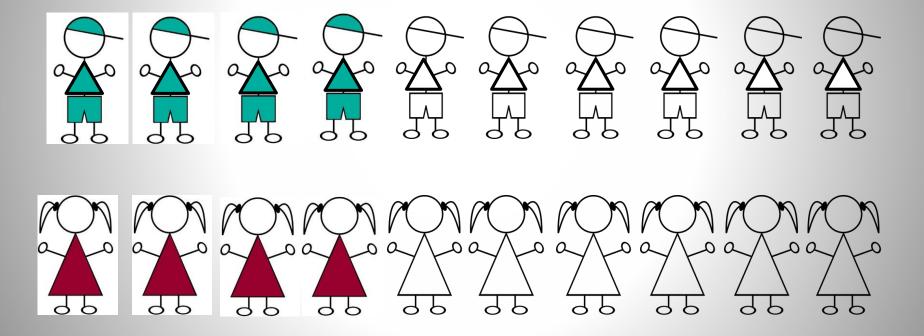


\*Child recommendations for physical activity in CMO report 2011 – one hour moderate activity per day HSE reports at least 60 minutes of moderate to vigorous activity on all seven days in the last week

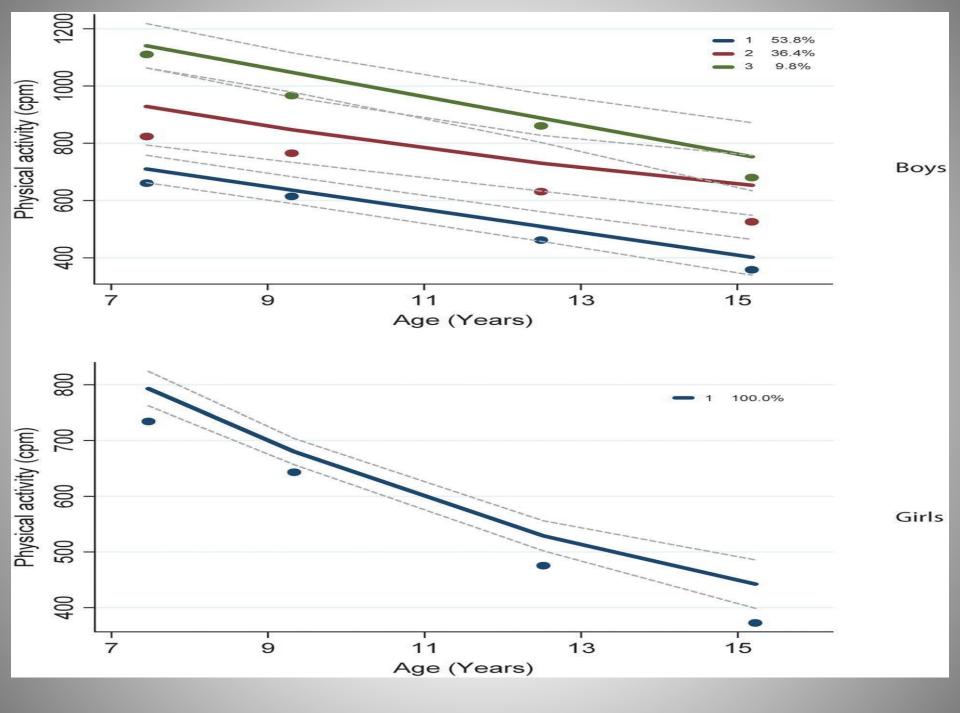
### Physical inactivity among children

Health Survey for England 2012

Around four in ten children aged 5-15 years are physically inactive\* (boys 39%, girls 45%)

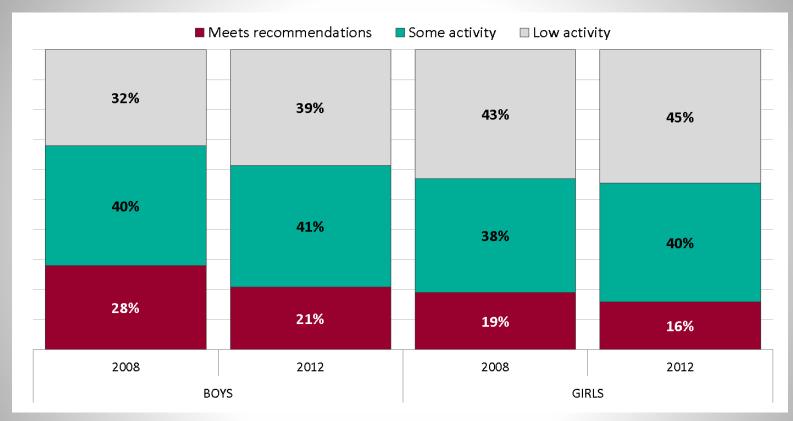


\*Fewer than 30 minutes of moderate to vigorous activity on each day or 60 minutes or more on fewer than seven days in the last week



### **Trends in physical activity**

Children aged 2-15years; Health Survey for England 2008-2012



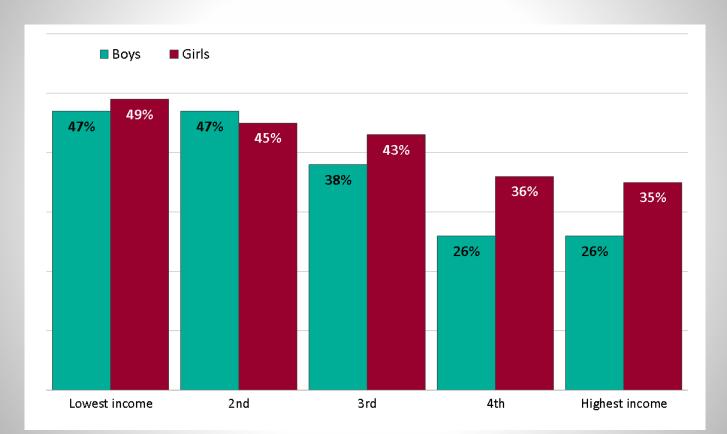
Low activity: <30 minutes of MVPA on each day, or MVPA of 60+ minutes on less than seven days in the last week Some activity: 30-59 minutes of MVPA on all seven days in the last week

Meets recommendations: At least 60 minutes of moderate to vigorous (MVPA) on all seven days in the last week

MVPA = moderate to vigorous intensity physical activity

## Physical inactivity by household income<sup>®</sup>

Children aged 2-15years; Health Survey for England 2012

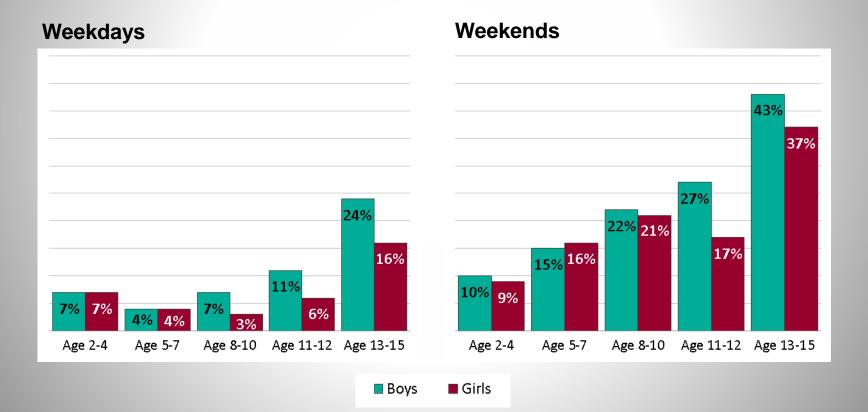


<sup>a</sup> Equivalised household income is a measure that takes account of the number of people in the household. For this analysis, households were split into five equal-sized groups banded by income level (income quintiles). Physical activity levels were compared between these groups

#### Time spent sedentary in leisure time

Children aged 2-15 years; Health Survey for England 2012

Proportion of children who spent six or more hours being sedentary per day by age group



## **Current activity levels and fitness**

- ✓ KS1 average 102 min a week
- ✓ KS2 average of 114 min a week
- ✓ 67% children below the recommended fitness levels
- ✓ By age 15 a child is 5x more likely to be unfit than obese
- Physical activity in particular high intensity predicts fitness

## Why do children participate?

- Children participate:
  - Enjoy
  - Feel competent
  - Not forced to compete
  - Feel supported by others



## How to engage

- ✓ Opportunity to socialise with friends
- ✓ Variety of activities
- Include children in decision making on what activities to include
- ✓ Energy levels self-determined

## Engaging children

 Positive relationship with programme leaders and other pupils

✓ Opportunity to work with and for others

✓ Culture of play

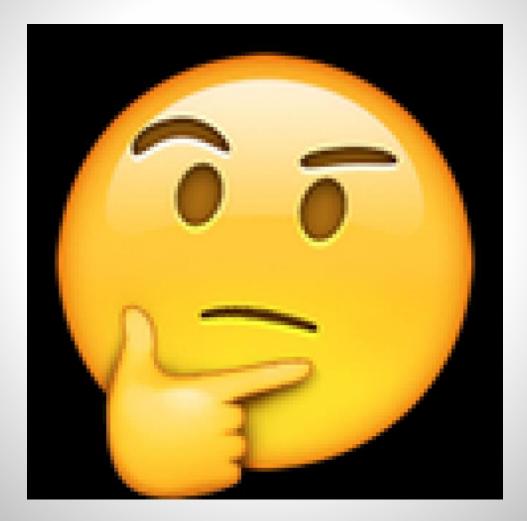
## School roles

- Encourage parents and carers to get involved in physical activities with their children
- Staff should act as role models
- School physical activity policy

## Key Messages – implications for practice

- ✓ Promote participation not excellence
- ✓ Promote social skills not just physical skills
- Show respect and compassion for children not strict discipline
- Emphasise fun not weight loss or health
- Provide appropriate choice of clothing and changing facilities
- Positive experience during activity parents/instructors/teachers influence this

## Why bother?



## References

1. Dumith SC, Ramires VV, Souza MA, Moraes DS, Petry FG, Oliveira ES, Ramires AV, Hallal PC. Overweight/obesity and physical fitness among children and adolescents. *Journal of Physical Activity*. 2010;7:641-648

2. Tomkinson G, Global changes in anaerobic fitness test performance of children and adolescents (1958-2003). Scand J Med. Sci. Sports 2007; 17(5);497-507

3. Fedwa, A.I & Ahns, S. (2011). The effects of physical activity and physical fitness on children's achievement and cognitive outcome. Research Quarterly for Sport and Exercise, 82(3), 521-535 doi:10.1080/02701367.2011.10599785

Ortega FB, Ruiz JR, Castillo MJ, Sjostrom M. Physical fitness in childhood and adolescence: a powerful marker of health. International Journal of Obesity 2008;32:1-11

5. National Institute of Clinical Excellence. Review 3: The views of children on the barriers and facilitators to participation in physical activity; a review of qualitative studies. 2007; Available from <a href="http://www.nice.org.uk/PH17">http://www.nice.org.uk/PH17</a>

6. Peeters C, Marchland H, Tulloch H, Sigal RJ, Goldfield GS, Hadiyannakis S, Kenny GP. Perceived facilitators, barriers and changes in a randomized exercise trial for obese youth: a qualitative inquiry. Journal of physical activity and health 2012;9:650-60

7. Murtagh J, Dixey R, Rudolf M. A qualitative investigation into the levers and barriers to weight loss in children: the opinions of obese children. Arch Dis Child. 2006;91:920-923.

8. Dobbins M, DeCorby K, Robeson P, Husson H, La Roche RL. School-based physical activity programs for promoting physical activity and fitness in children and adolescents aged 6-18. Cochrane Database of Systematic Reviews 2013;Issue 2

9.. Fraser C, Lewis K, Manby M. Steps in the Right Direction, Against the Odds: An Evaluation of a Community-Based Programme Aiming to Reduce Inactivity and Improve Health and Morale in Overweight and Obese School-Age Children. (2012) *Children and Society*, 26; 124-137. doi:10.1111/j.1099-0860.2010.00329.

10. Lewis K, Fraser, C. and Manby M. (2014) <u>Is it worth it? A Qualitative study of the beliefs of overweight and obese physically active children.</u> Journal of Physical Activity and Health.

11. Lewis, K and MacKenzie, A. (2015) Should strategies to tackle childhood obesity also focus on mental health? British Journal of School Nursing, 10 (9). pp. 434-438. ISSN 1752-2803

12. Farooq, M.A. et al. (2017) Timing of decline in physical activity in children and adolescence: Gateshead Millennium Cohort Study. British Journal of Sport Medicine http://bjsm.bmj.com/content/early/2017/02/05/bjsports-2016-096933