

Developing Research into Physical Activity?

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Overview



- The wider perspective on physical activity in health
- Physical Activity or Obesity reduction, emerging priorities
- New concepts for those delivering physical activity in the field

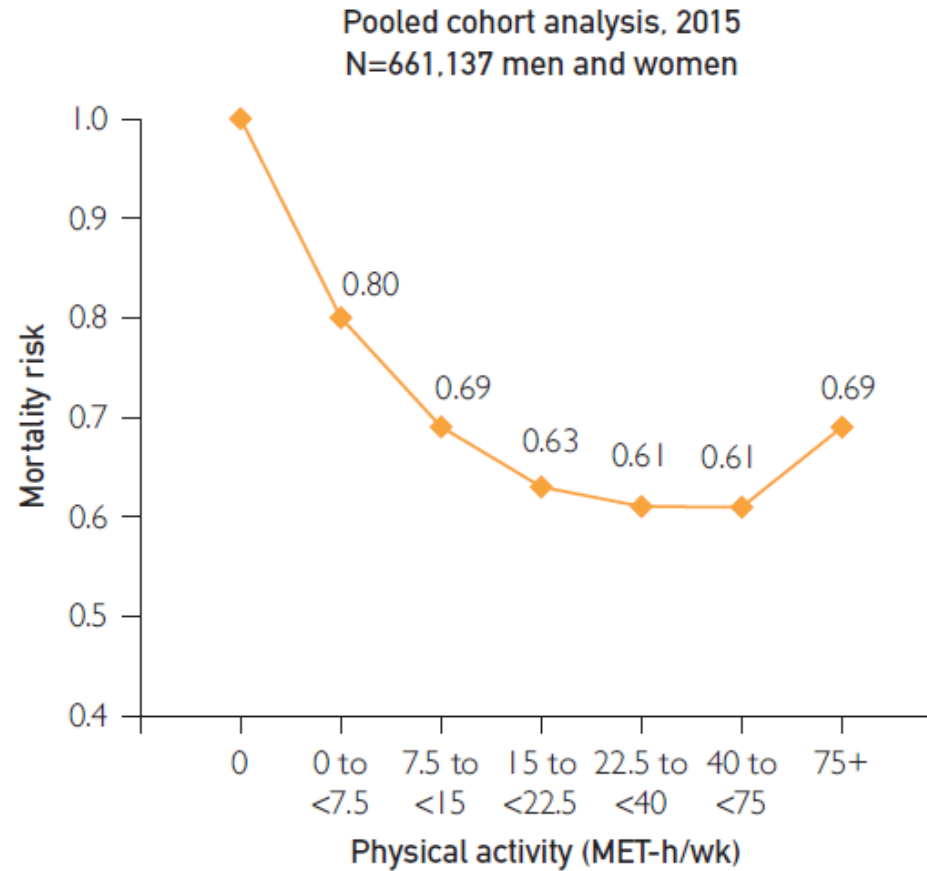
Physical Activity and Health



- We know its go

There is clear evidence of disease and lowering

evention of chronic



Physical Activity and Health



- The list of benefits of PA on health is impressive!

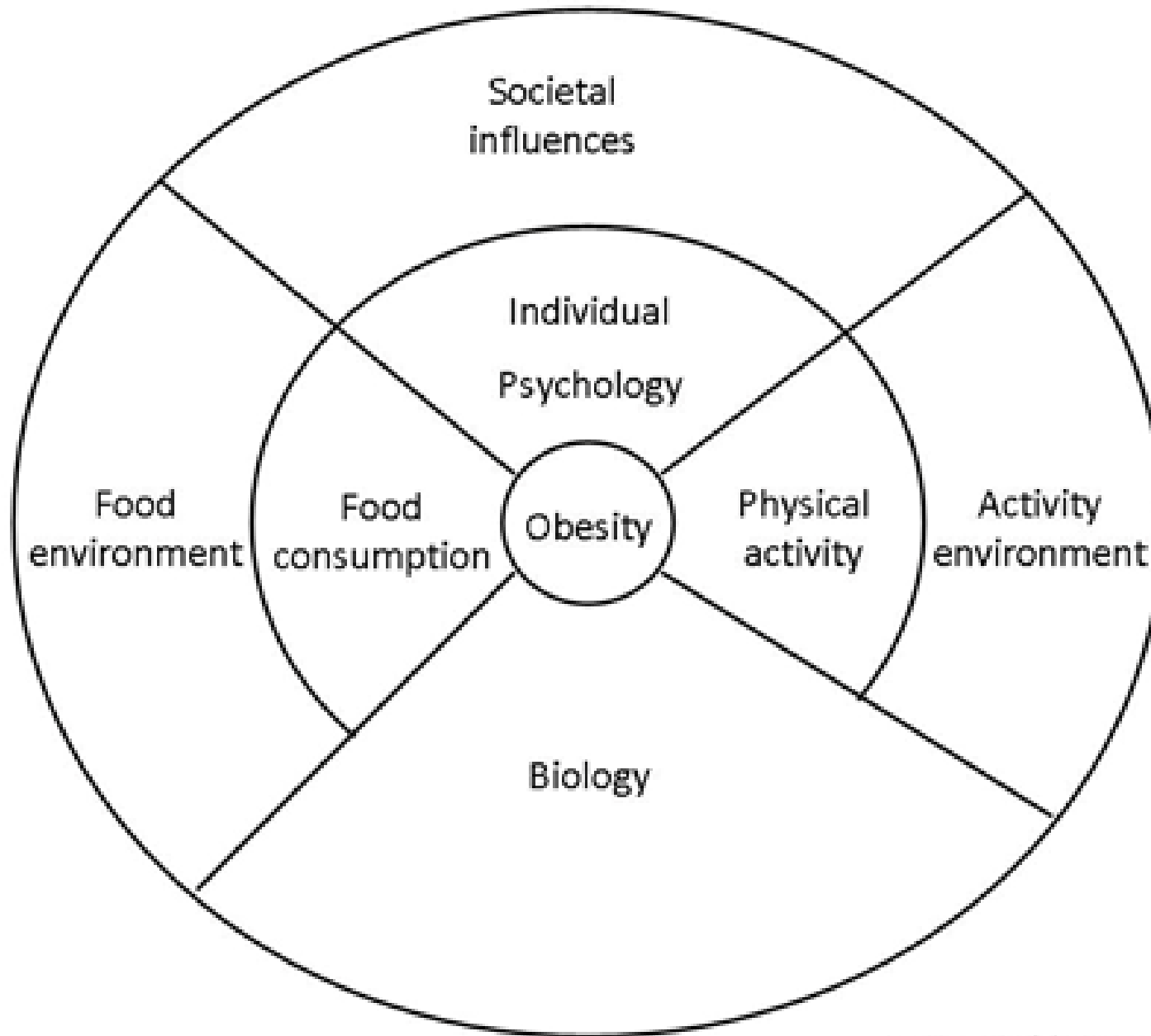
Inactivity-related diseases account for a significant and growing cost for healthcare systems.

“There should be a merging of the fitness industry with the healthcare industry”

The concept of “Exercise is Medicine” has also become more commonly used in recent years

shift

Full M
Cluste
Core L
Individ
Social
Individ
Activit
Food C
Food P
Individ
Physic



Source: Foresight systems map, 2007

Its complicated



We still do not fully understand:

- How either the social environment influences PA and weight status.
- How the built environment influences PA and weight status.
- How the social and built environments interact to produce high PA and Healthy weight or the reverse.

- We do know quite a bit about the biology though

- PA has beneficial effects across the lifespan and there is remit for diverse provision of PA and fitness type services that target individuals from pre birth to frail older age.

- BUT, untangling all the issues around the topic is messy.

- A need to understand sedentary behaviour as well as PA (they are different)

Active Couch Potatoes

It is possible for people to be physically active for health benefit and sedentary!

Termed 'active couch potatoes'

Cycle to work
Sit at a desk all day
Cycle home
Watch TV

60mins MVPA and lots of sitting

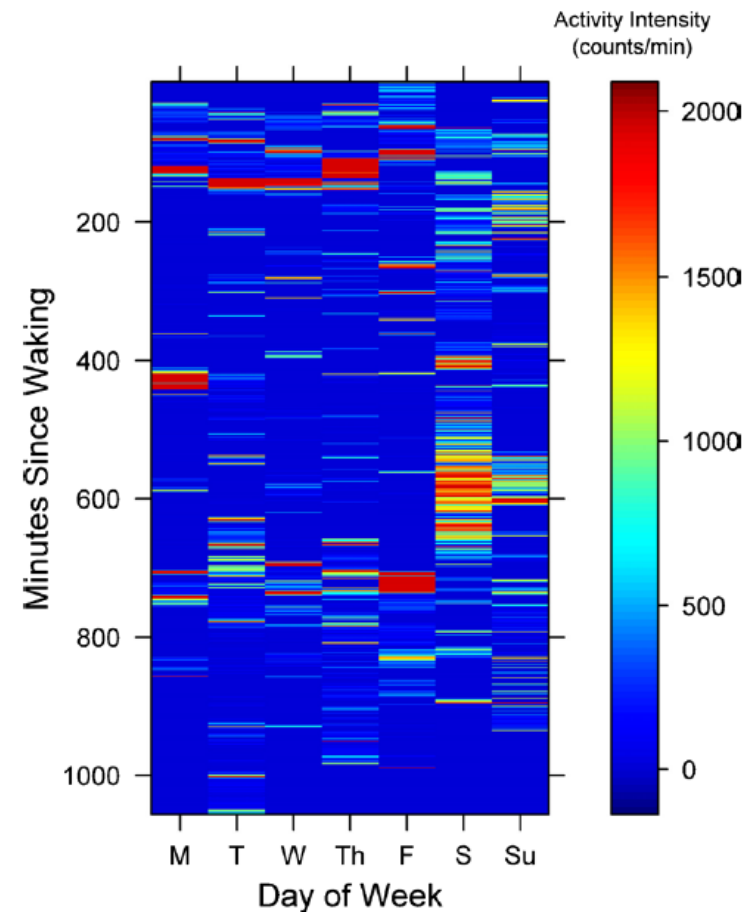
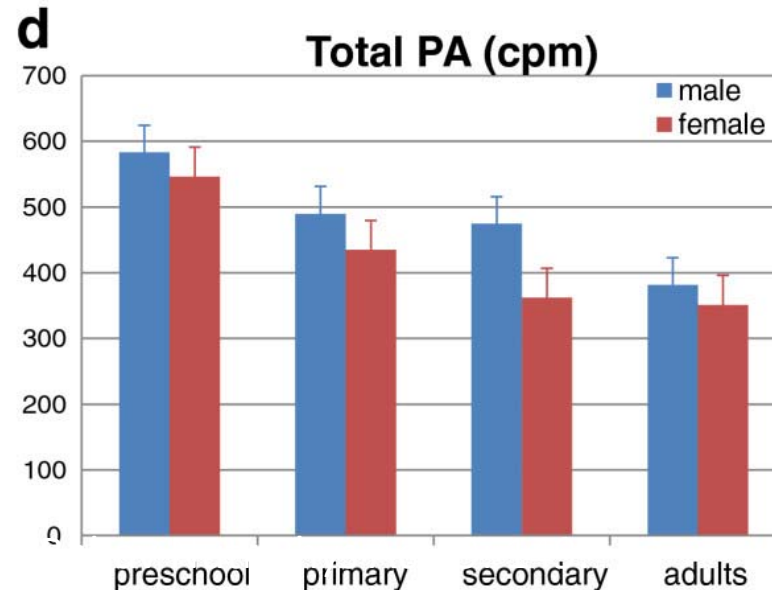
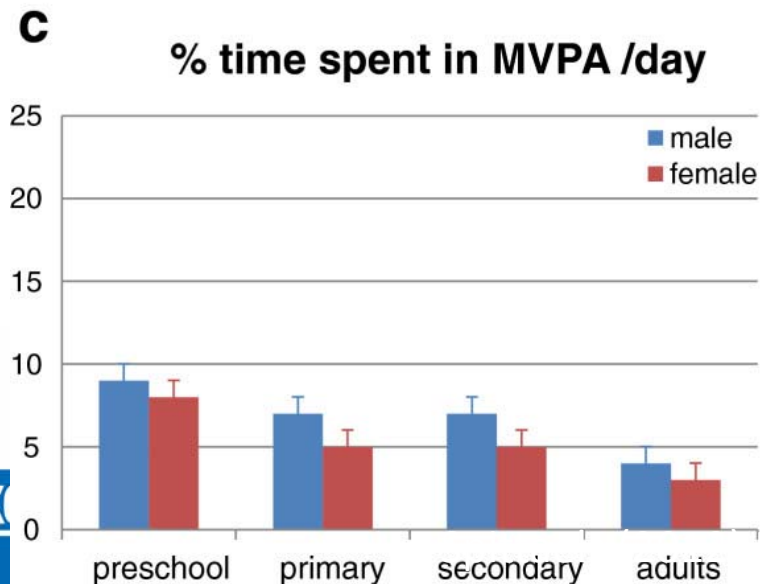
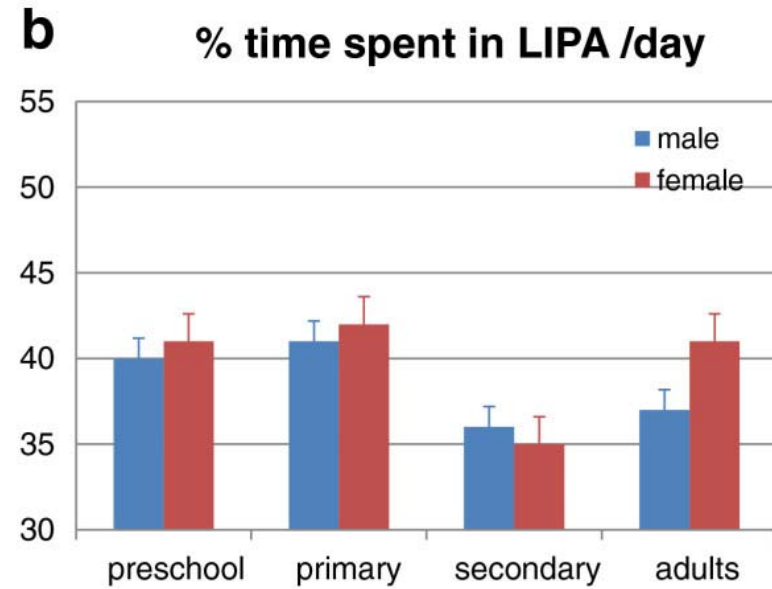
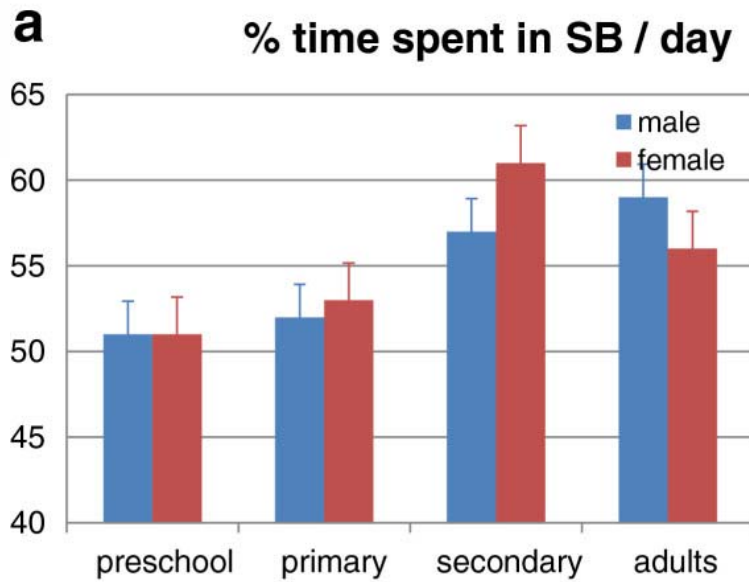


Figure 1. Being physically active, but also highly sedentary: 1 wk of accelerometer count data showing, on average, 31 min·d⁻¹ moderate- to vigorous-intensity activity time (>1951 counts per minute) and 71% of waking hours sedentary (<100 counts per minute).

It is a lifespan issue



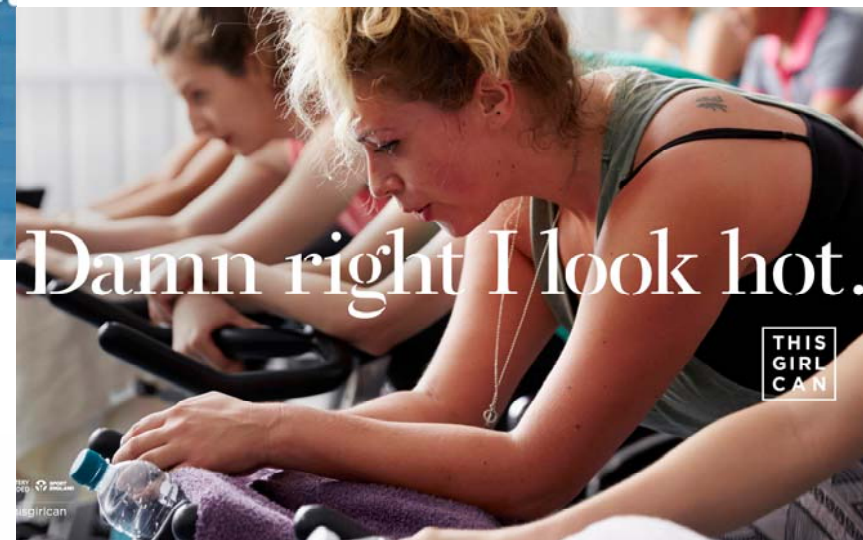
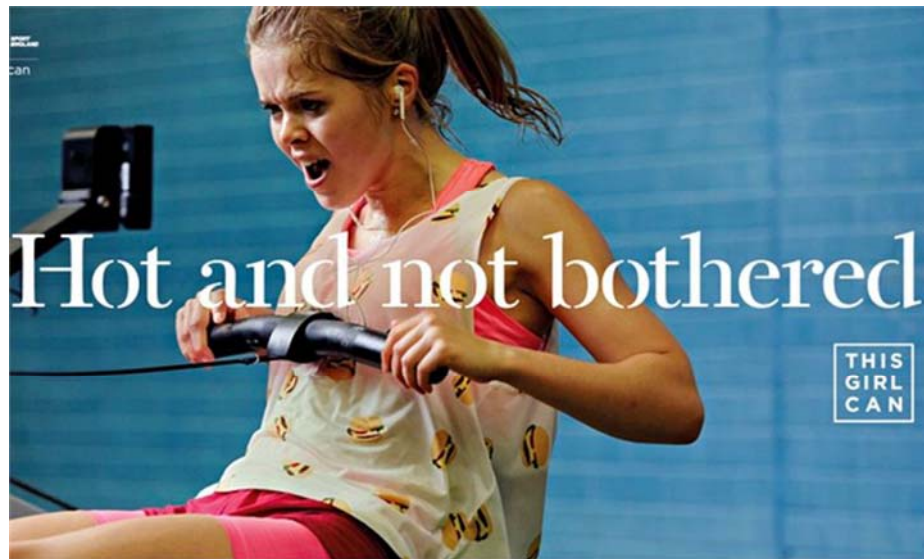
There are some people we don't need to worry about



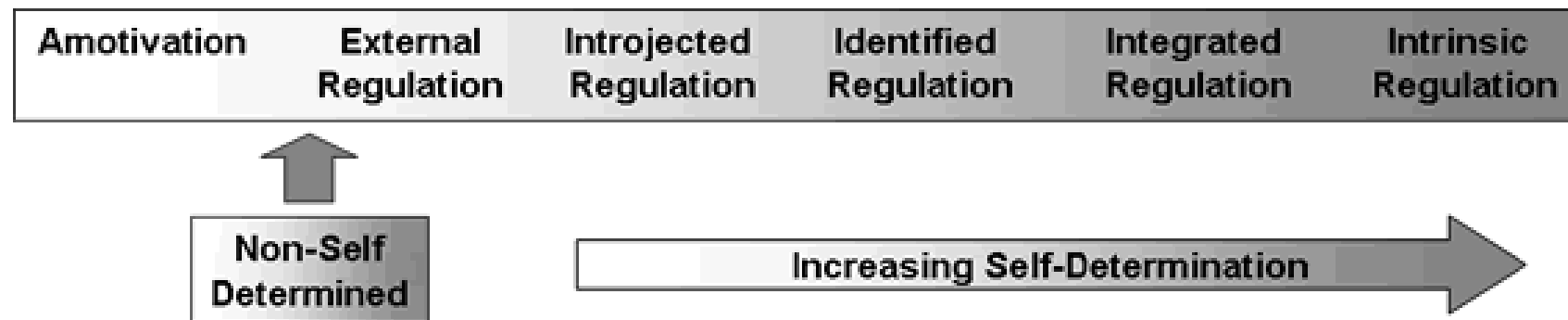
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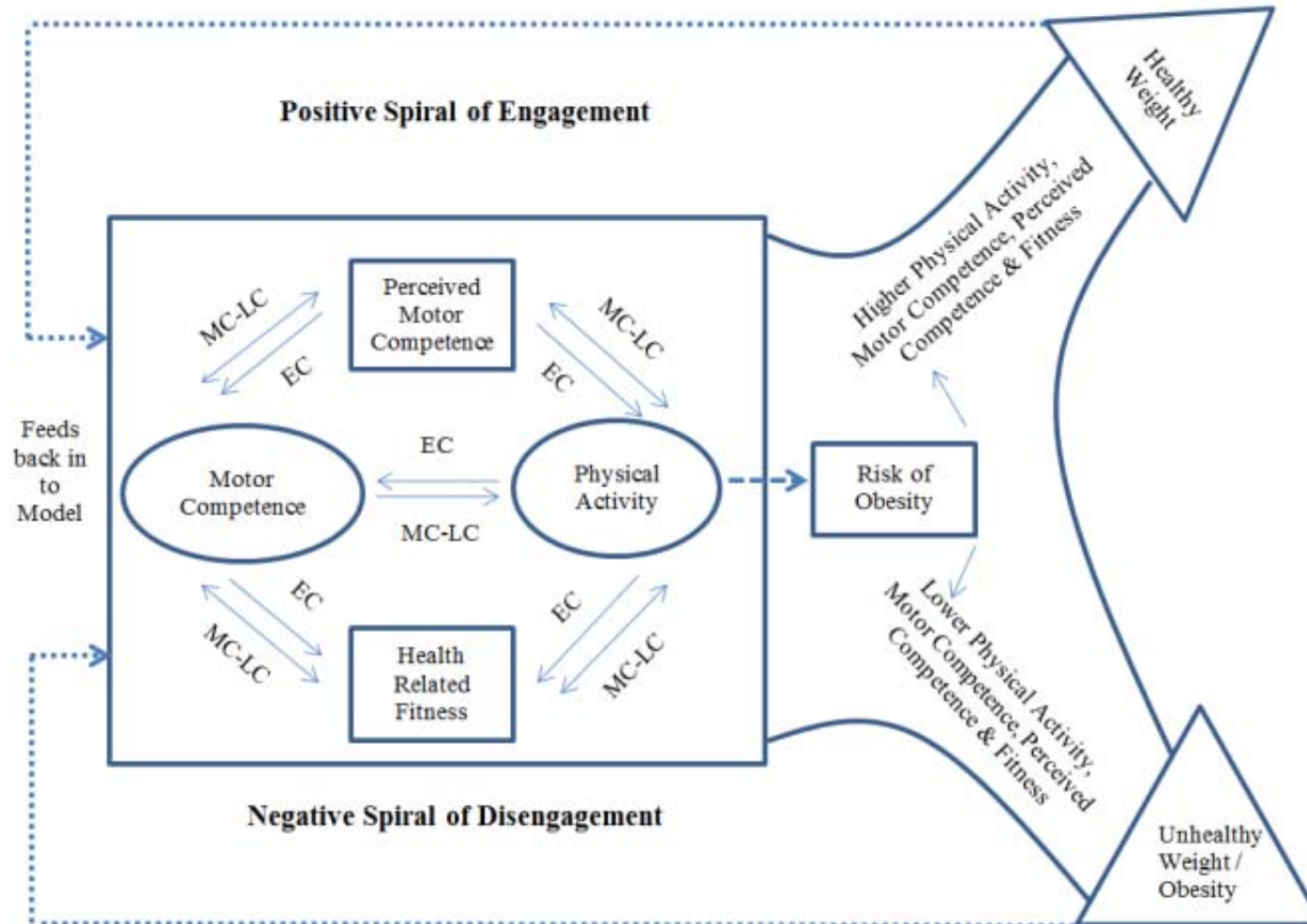
New modes/initiatives/services need to target non traditional target populations in different ways.



Seek to move people along a continuum of self determination



A new focus on an old issue?



Fundamental Movement Skills (FMS)



**If you can't jump you won't
take part in...?**

Fundamental Movement Skills (FMS)



What is it?

The development of fundamental movement skills and fundamental sport skills that permit an individual to move confidently, with control in a wide range of sport situations

- **It doesn't just happen!**
- **Takes combined efforts of children, parents, schools, community sport providers, leisure services and the private sector**
- **Not having the skills to play is one major reason for drop out from physical activity and sport**
- **Considerable evidence suggests children who do not acquire FMS will be less active**
- **Emerging evidence that when adults engage in FMS training they will undertake many more activities**



Agility



Balance



Co-ordination



Speed



Jumping



Climbing



Walking



Skating



Hopping



Swimming



Skipping



Balance



Throwing



Dribbling



Kicking



Throwing



Hitting



Catching

FMS



- We have a significant motor competency gap
- We could target children and we will see some good improvements in PA, reductions in obesity and an increasing likelihood that children will become more active throughout the lifespan

But

- Likely needs to be in a community setting that is not a traditional gym/leisure centre type environment
- In tandem with the UK school system makes sense and could augment any impact of provision

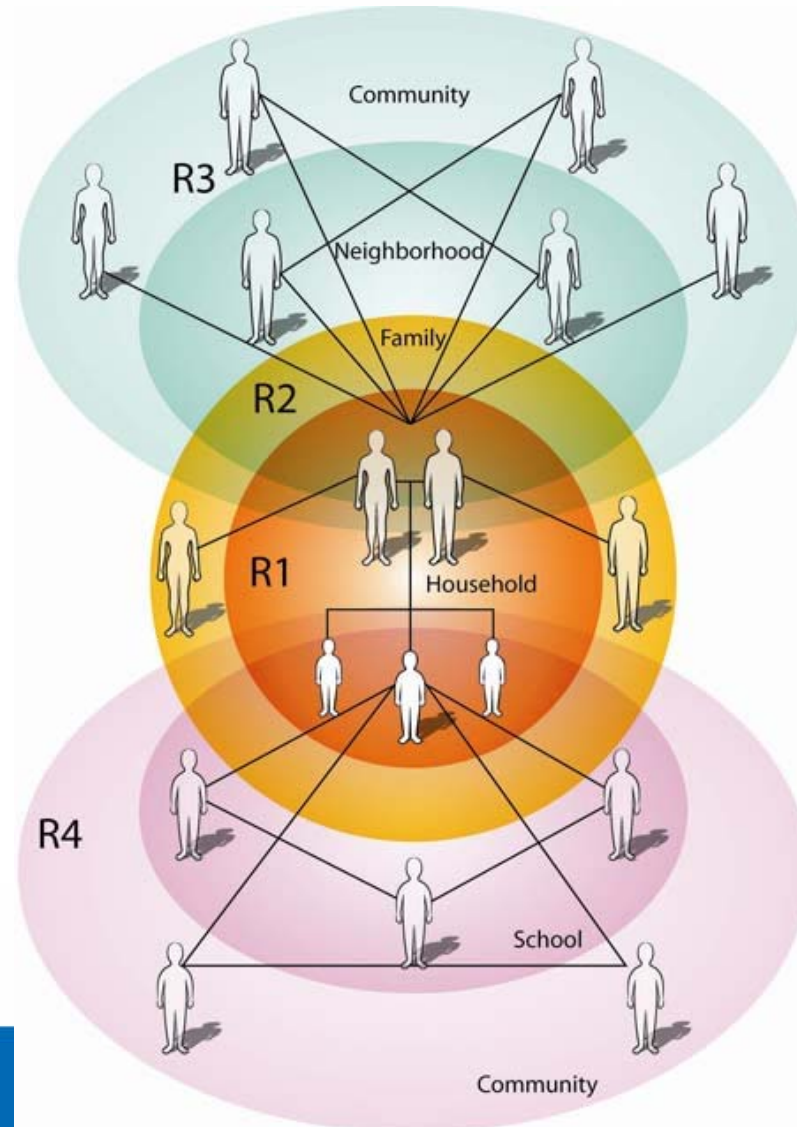
Its not just a children's issue



- Emerging work from Prof Dave Stodden's group in the US is suggesting that FMS based interventions in young-middle aged and older aged adults has a significant and meaningful impact on physical activity, weight status, physical function and other variables.

- Maybe we need to think about PE lessons for adults!

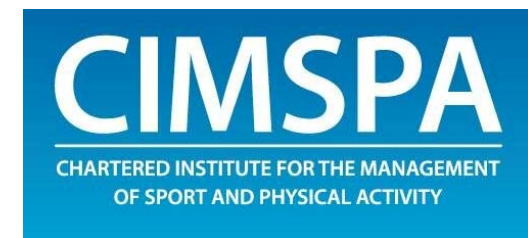
Understand the wider influences



But are we sufficiently educated/trained to make an impact



- Different populations (young, older, clinical)
- Different skills
- New developments
 - Gamified approaches
 - eHealth/mHealth
 - Quantified self
 - Integrated and individualised behaviour change approaches embedded into tech/locations



More people
More active
More often

But are we sufficiently educated/trained to make an impact



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Chartered Scientist

Certified Exercise Practitioner

Undergraduate Endorsement Scheme (BUES)

Laboratory Accreditation

Accreditation



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High standards are promoted in two particular ways:

1. Through the adoption of a strict BASES Code of Conduct to which all members must adhere. Violation of this code of conduct can result in sanctions, including removal of accreditation. The code of conduct serves to ensure a minimum level of service to individuals or groups who make use of the range of services offered by sport and exercise scientists.
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The not so new (but aspirational) concept



- **High skills and knowledge base**
- **Understand the biology of PA and obesity**
- **Understand behaviour change**
- **Understand how to deal with different people**
- **Translational from the laboratory to wider society**
- **Joined up and shared working across sectors**

