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Projet N° 4.7.360 - Project N° 4.7.360

NOMADe

Increasing physical activity levels and reducing sedentary behaviors of office workers

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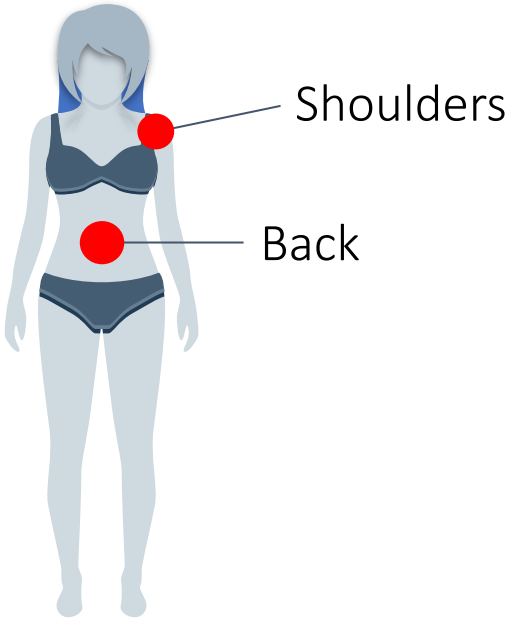
Roadmap

I/ Why are sedentary behaviors (SB) and physical inactivity (PinA) critical issues?

II/ How can we fight SB and PinA?

III/ Perspectives

I/ Why are SB and PinA critical issues?



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Why are SB and PinA critical issues?

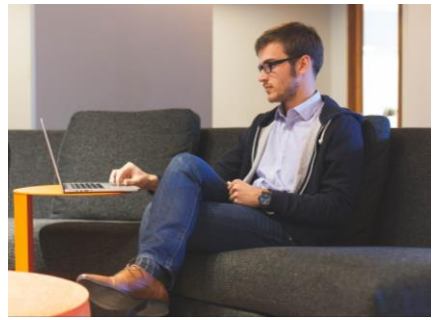
Definitions:

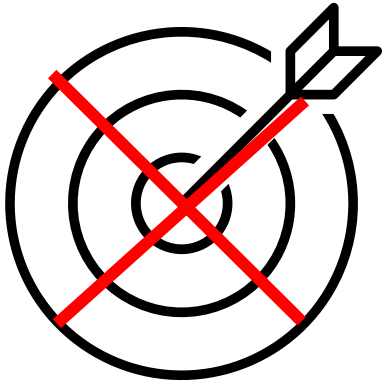
SB: "any **waking behaviour** characterized by an energy expenditure ≤1.5 METs while in a **sitting or reclining posture**"[1]

PA: "any bodily **movement produced by skeletal muscles** that results in energy expenditure."[2]

PinA: not meeting PA guidelines[3,4]

- < 150' of moderate intensity PA / week
- < 75' of vigorous intensity PA / week



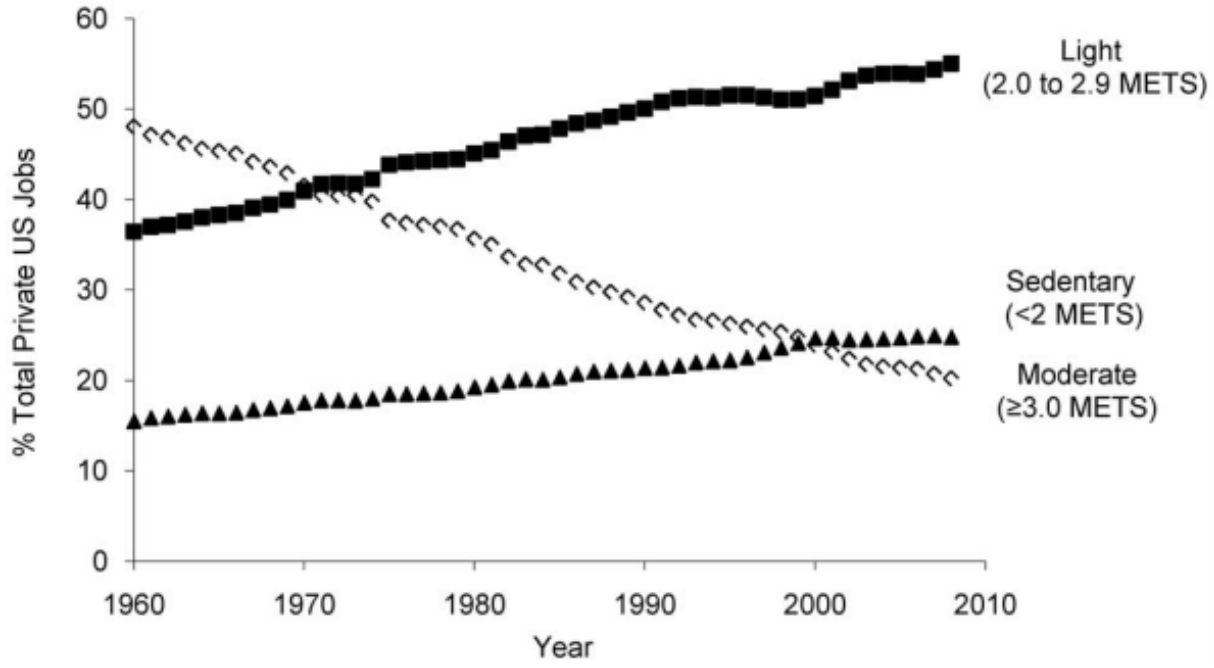


[1]Tremblay et al., 2017; [2]Caspersen et al., 1985; [3]Sedentary Behaviour Research Network, 2012; [4]WHO, 2020

Why are SB and PinA critical issues?

Context:

- PinA: > 1/3 adults[1]
- SB: 15h on work days[2]
- ⬆ Sedentary jobs[3]



[1]Guthold et al., 2018; [2]Saidj et al., 2015; [3]Church et al., 2011

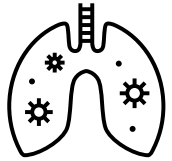
Why are SB and PinA critical issues?

Health consequences:

PinA and SB = independent risk factors

- PinA: 9%
- SB: 3%

} of all deaths in the world[1,2]



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[1]Lee et al., 2012; [2]Rezende et al., 2016; Biswas et al., 2015; Patterson et al., 2018; Steffens et al., 2016; HAS, 2019

Why are SB and PinA critical issues?

SB : ≥ 10h/day = ↑ 74% back pain (n = 489)[1]

Physical activity programmes

Prevention of LBP

Risk of episode
↓ 35%[2]

Therapeutic tool for non specific CLBP

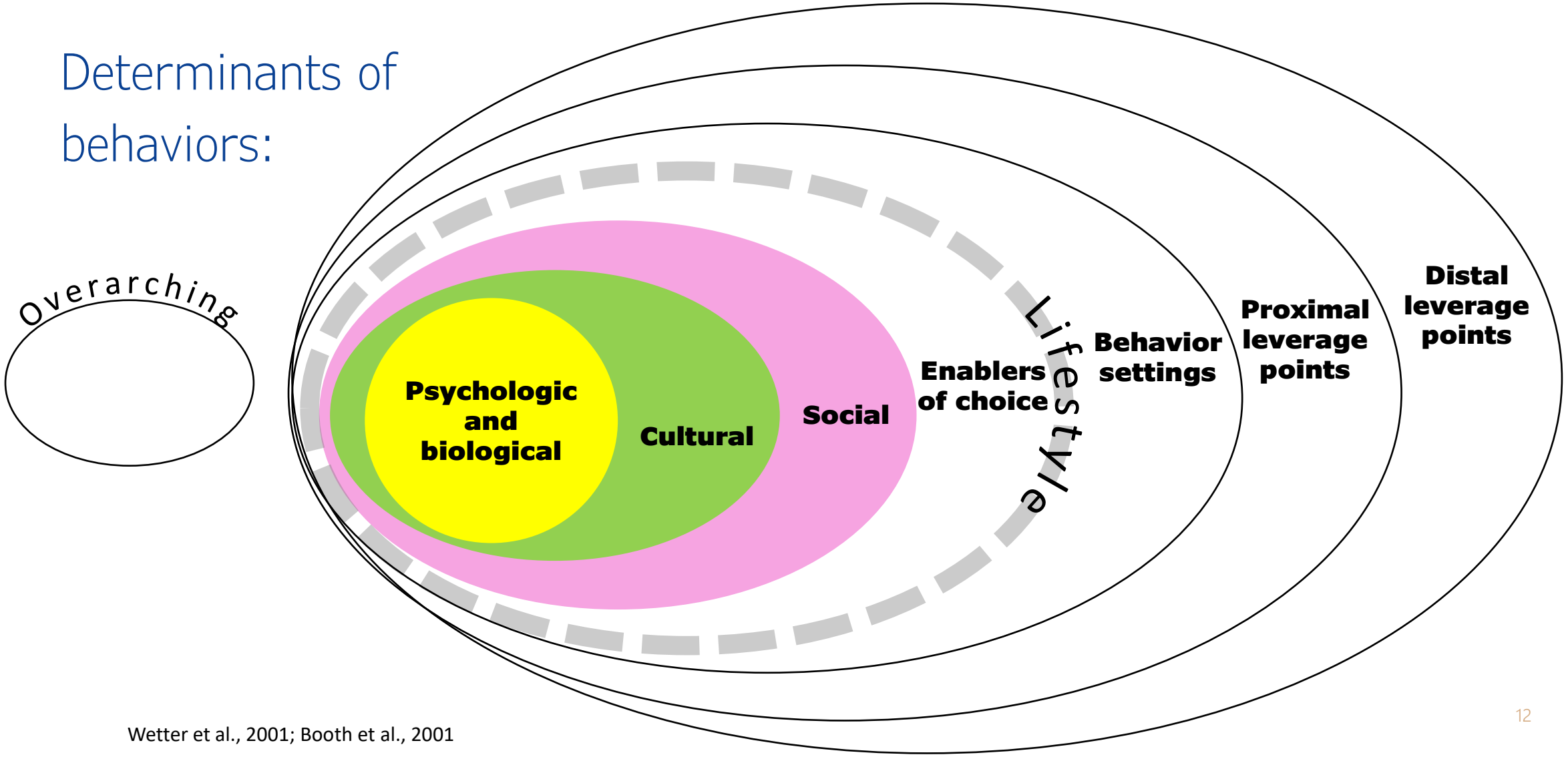
- Pain[3,4] ↓
- Back function[3] ↑
- Comorbidities[5] ↓
- Physical deconditioning[6] ↓
- Sick leaves[7] ↓

[1]Hanna et al., 2019; [2]Steffens et al., 2016; [3]Hayden et al., 2020; [4]van Middelkoop et al., 2010; [5]Bellón et al., 2021; [6]Henchoz et al.,2008; [7]Poiraudeau et al., 2004

II/ How can we fight PinA and SB?

How can we fight PinA and SB?

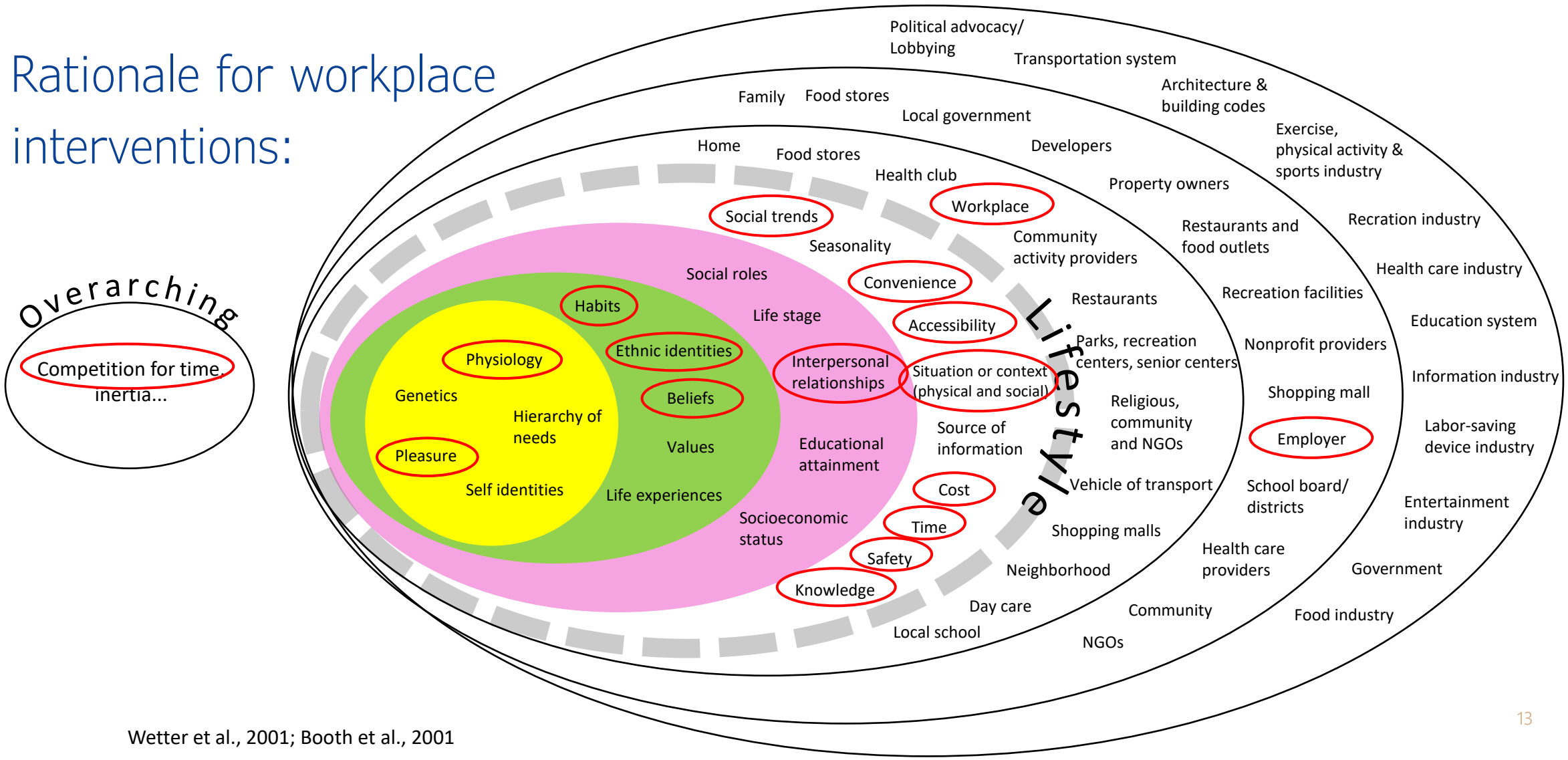
Determinants of behaviors:



Wetter et al., 2001; Booth et al., 2001

How can we fight PinA and SB?

Rationale for workplace interventions:



Wetter et al., 2001; Booth et al., 2001

How can we fight PinA and SB?

State-of-the science:

- Insufficient current level of evidence

Sedentary behaviors

Individual level → **Physical environment**

Least effective → Most effective

Physical activity

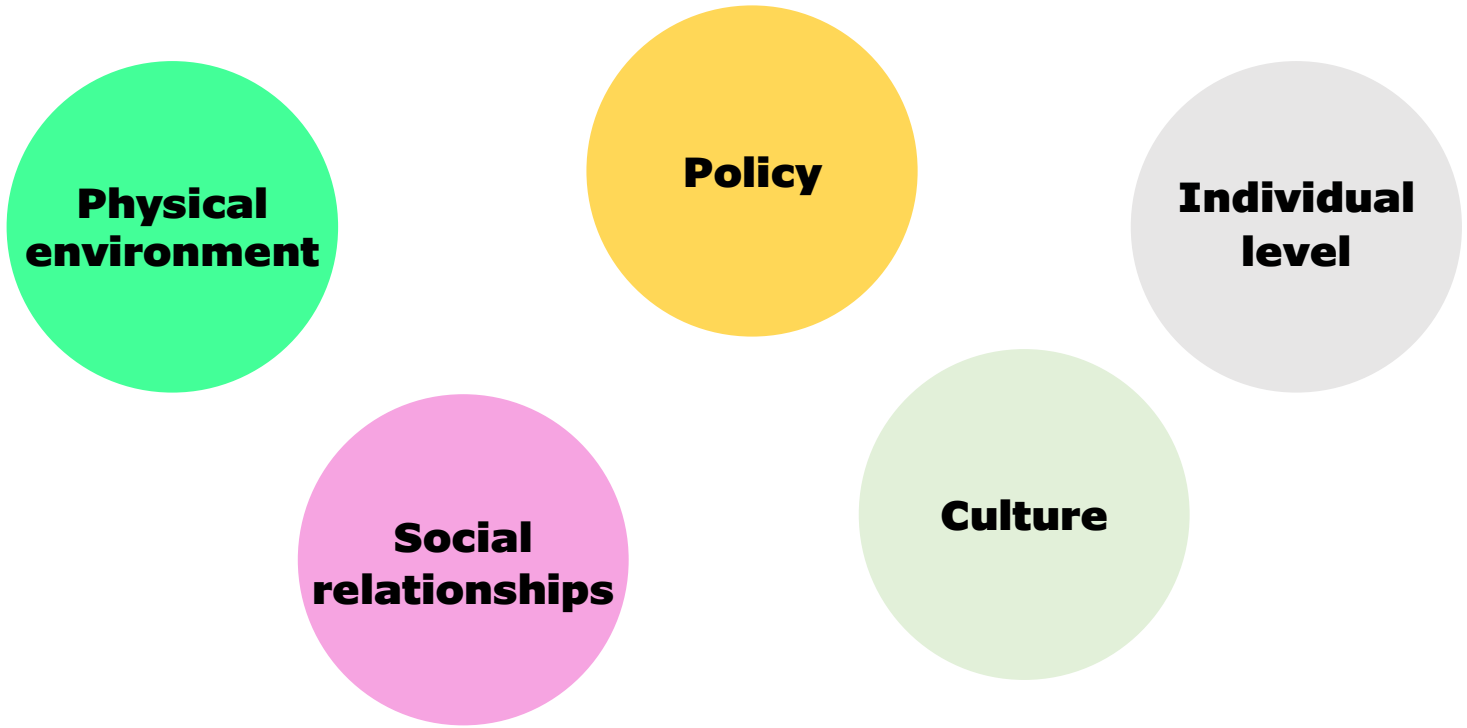
Physical environment → **Individual level**

Least effective → Most effective

Shrestha et al., 2018; Conn et al., 2009

How can we fight PinA and SB?

State-of-the science:



Shrestha et al., 2018; Conn et al., 2009

III/ Perspectives

Perspectives

What is needed:

- SB and PinA in different settings
- Future trials (⬇risks of bias; ⬆nb of employees)
- Variety of interventions

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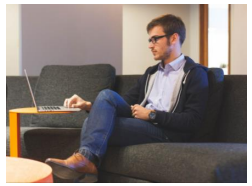

Increasing PA levels and reducing SB of office workers: a systematic literature review

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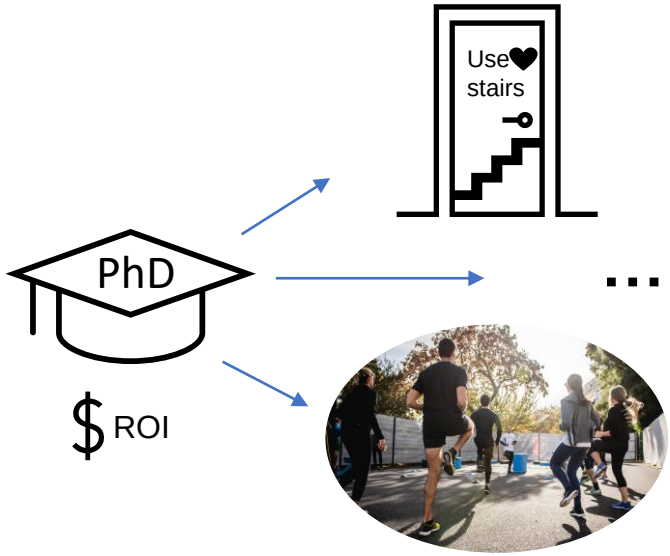

Thank you for your attention!

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