Promoting student health through addressing the school environment

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Outline

- Why promoting health does not mean neglecting attainment
- Evidence of what interventions work to promote health through modifying the school environment
- Evidence of how the school environment benefits or harms student health in the absence of interventions

Education policy in England neglects health/wellbeing

- League tables focused narrowly on attainment
- Healthy Schools programme no longer national
- PSHE non-statutory, schools spend less and less time teaching it[1]

Might these developments be underpinned by two ideas?

1) Promoting attainment and health/personal development is “zero-sum game”

2) Improving attainment is sufficient to increase economic competitiveness[2]

- Both these ideas are flawed.

Zero sum game?

- Students in better health achieve more academically[3]

- Student progress in education and personal developmental interact over time[4,5]

Zero sum game?

- Personal development and wellbeing get more attention in e.g. Finland, Sweden, Australia and Singapore that do better in PISA rankings[6]

- THE CLINCHER: Meta-analyses of experimental evidence report that physical and mental health programmes in schools also boost academic learning[7-9]

Attainment all that matters economically?

- An effective labour force also requires non-cognitive skills, such as resilience and team work skills[10]

- Productivity is improved by better health of workers[11]

Balance and synergy

- Schools need to teach students academic knowledge/ cognitive skills

- But schools can/should develop wider personal skills, ensure wellbeing and promote health

But how?

- Already evidence that health education delivered through curriculum can have impacts on health, though generally small – e.g. numerous Cochrane reviews

- Focus here on emerging evidence that modifying the wider school environment can promote health

Systematic Review[12]

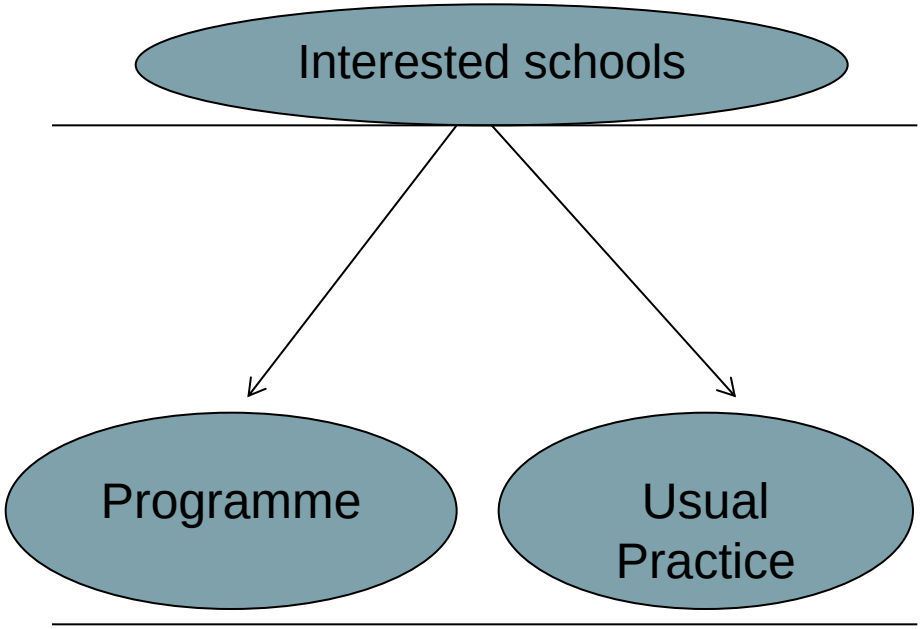
- Cluster RCTs
- School children 4-18 yrs
- HPS interventions
  - *curriculum, environment, community*

What is a systematic review?

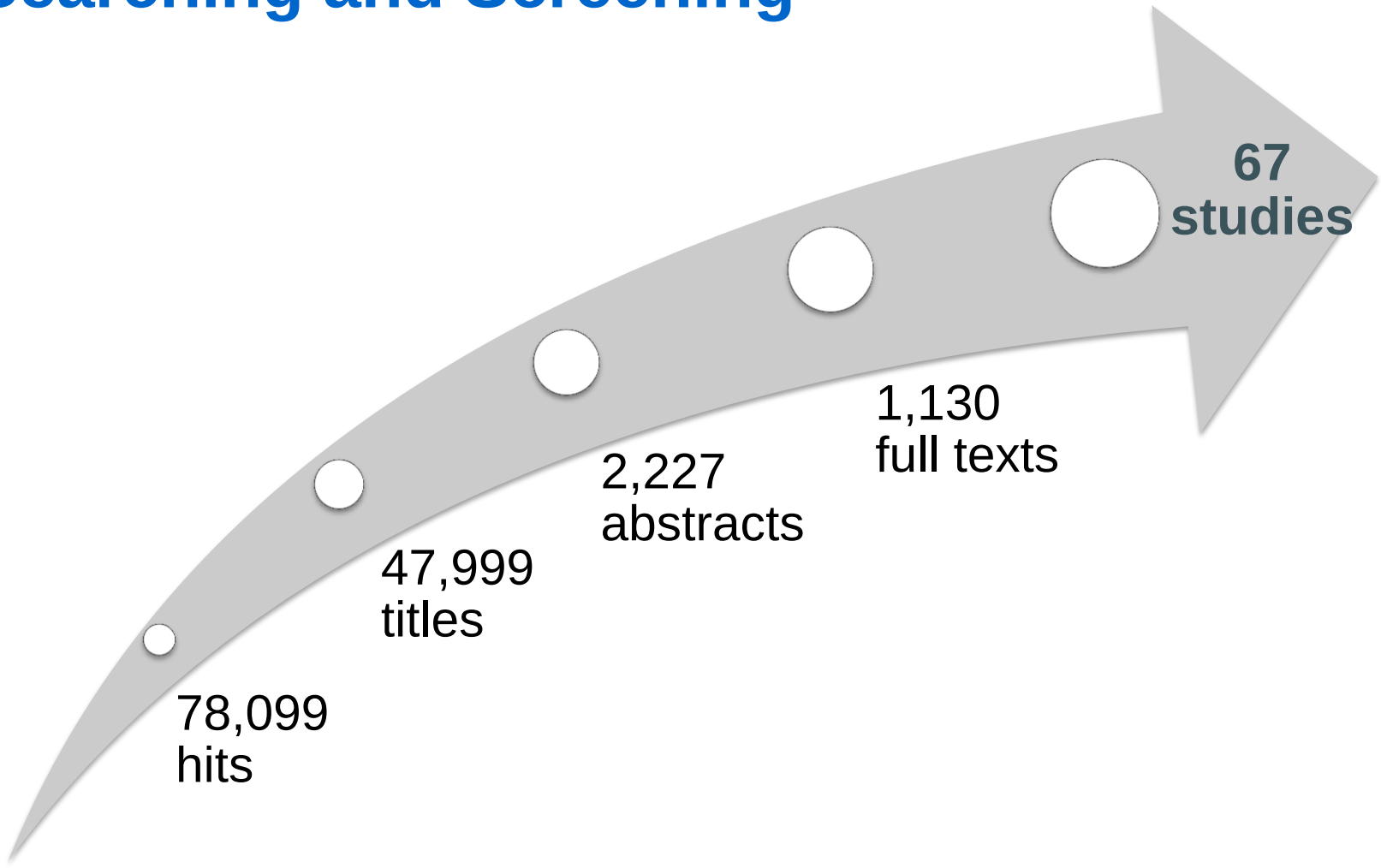
- A single research study not good guide to policy
- Traditional reviews are biased (intentionally or unintentionally)
- Systematic review has:
- - explicit research question to answer
- - comprehensive search of all studies
- - explicit inclusion criteria and quality assessment
- - clever way of pooling results

What is a cluster RCT?

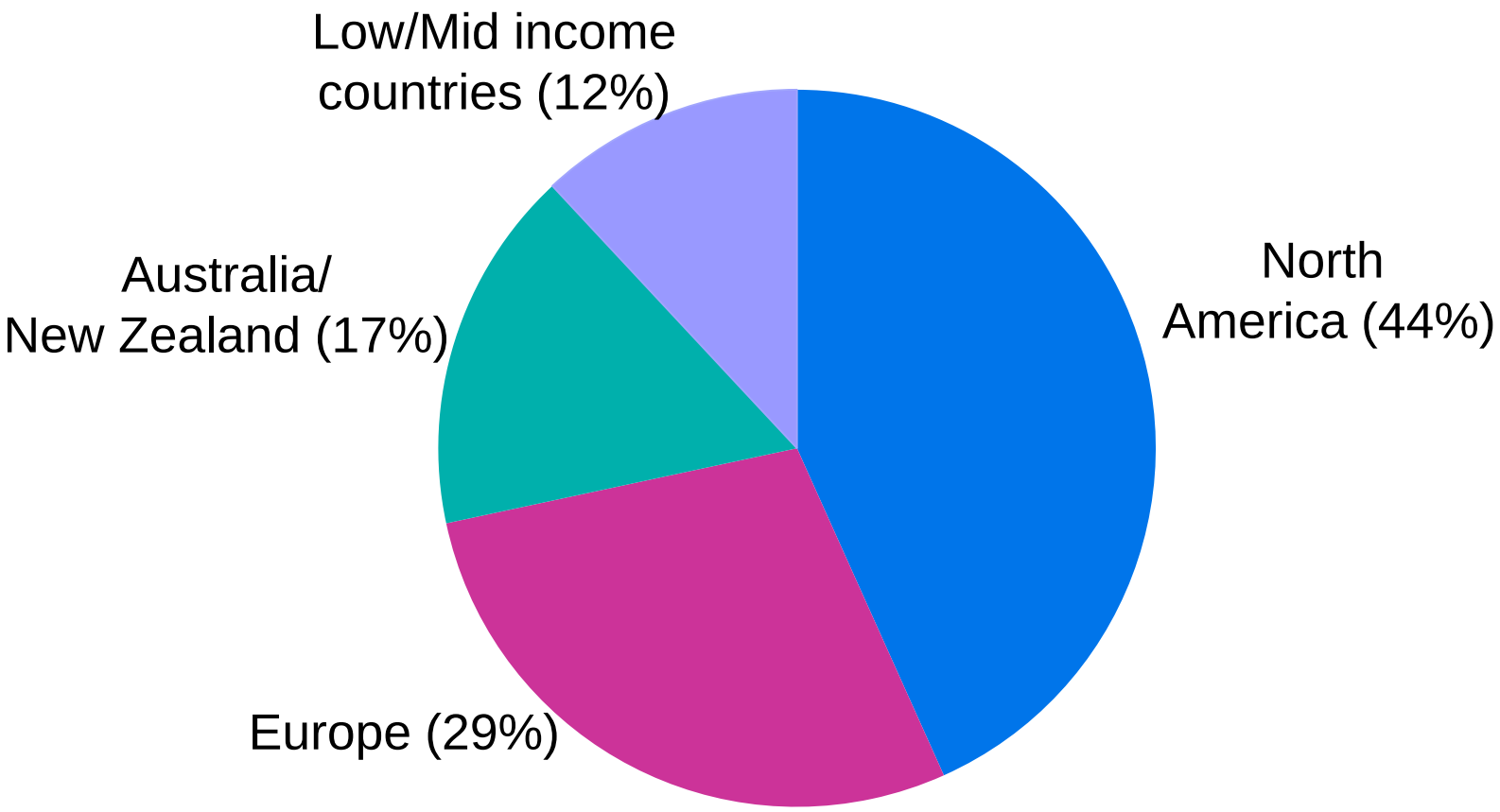
- Recruit schools interested in a programme
- Do baseline surveys
- Then randomly allocate ½ to the programme; ½ to continue with normal practices
- Then do follow up surveys
- If enough schools are allocated this was then 2 groups will be same
- Estimates intervention effect and 95% confidence interval

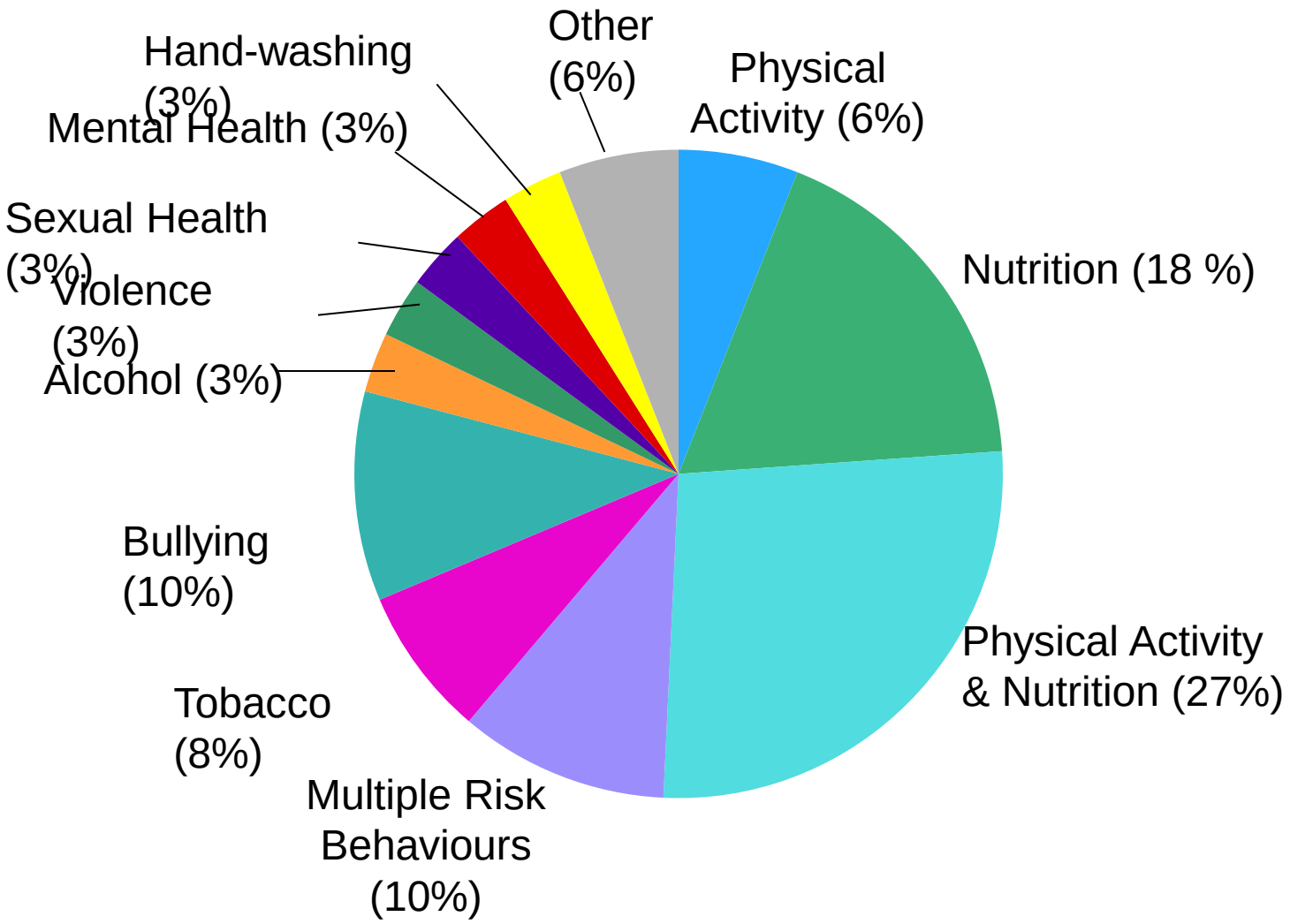


Searching and Screening



Where is the evidence from?





What do they focus on?

Meta-Analyses

1. BMI
2. zBMI
3. Physical Activity
4. Physical Fitness
5. F&V intake
6. Fat intake
7. Tobacco
8. Alcohol
9. Drugs
10. Violence
11. Being bullied
12. Bullying others
13. Depression

Effective:

- BMI (not zBMI)
- physical activity
- fitness
- fruit and vegetable intake
- tobacco use
- being bullied

Promising:

- fat intake
- alcohol
- drug use
- violence
- bullying others
- hand-washing

Insufficient data:

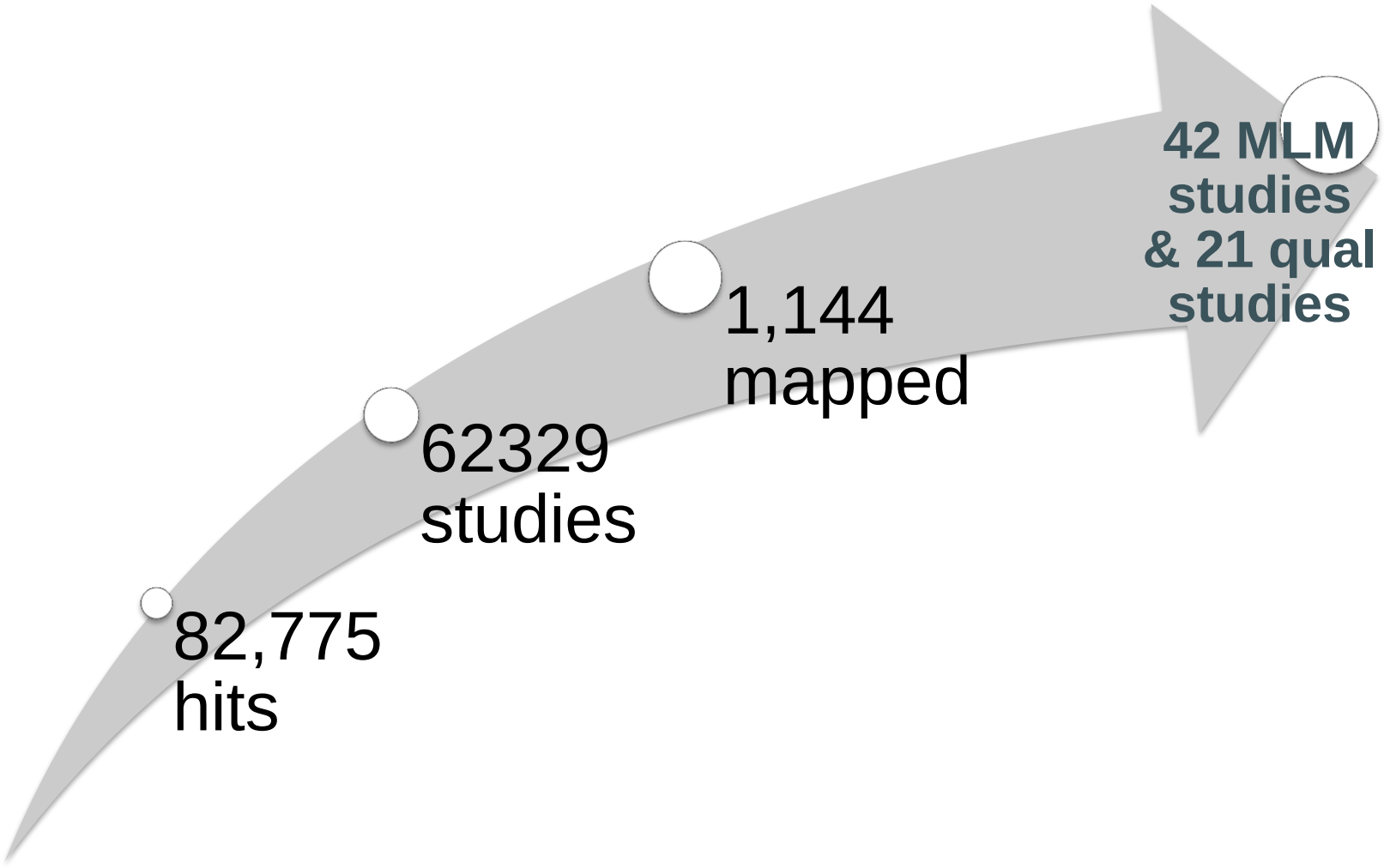
- mental health
- sexual health
- others

(e.g. oral health, sun safety, accident prevention, eating disorders**)**

Systematic review of studies of school effects on health[5]

- Focused on health effects of school's core business (management, teaching, discipline, pastoral care) - not interventions
- Quantitative studies – multi level models
- Qualitative studies – interviews, observations focused on potential pathways

Searching and Screening



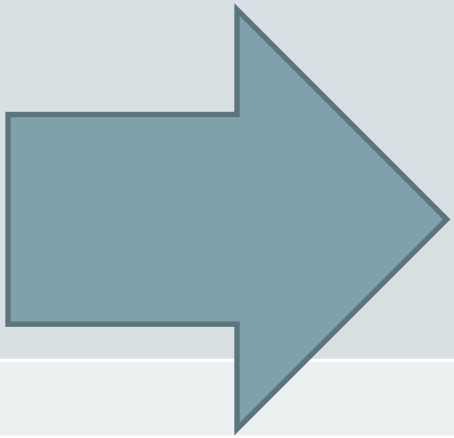
Multilevel model studies

- Focus on 4 studies
- Health effects of schools “adding value” educationally
- i.e. attainment higher and truancy lower than social profile of students would predict

Study	Setting	Design	Outcome	Association
Aveyard et al 2004	Secondary students (age 11-16) in **West Midlands**	Cross-sectional	Regular **smoking**	OR = 0.83 95% CI 0.73 to 0.95
Bisset et al 2007			**Alcohol** at least once a month	OR = 0.87 95% CI 0.78 to 0.95
			Heavy drinking **alcohol**	OR = 0.91 95% CI 0.85-0.96
			Regular illicit **drug** use	OR = 0.90 95% CI 0.82 to 0.98
Markham et al 2008	Secondary students (age 13-14 at baseline) in **West Midlands**	Longitudinal	**Smoking** at least once per week (age 14-15)	OR = 0.85 per SD increase in value added 95% CI 0.73 to 0.99
			Smoking at least once per week (age 15-16)	OR = 0.80 per SD increase in VA 95% CI 0.71 to 0.91
Tobler et al 2011	Middle students (age 11-12 at baseline) in poor mostly black neighbourhoods in **US cities**	Longitudinal	**Alcohol** drinking in past 30 days (age 13/14)	OR = 0.60 95% CI 0.42 to 0.88
			5+ **alcoholic** drinks on one occasion in last two weeks (age 13/14)	OR = 0.44 95% CI 0.23 to 0.84
			Smoked in past 30 days (age 13/14)	OR = 0.48 95% CI 0.26 to 0.86
			Marijuana in past 30 days (age 13/14)	OR = 0.29 95% CI 0.15 to 0.57
			Group **fight** in past 30 days (age 13/14)	OR = 0.69 95% CI 0.50 to 0.96

Qualitative studies

- Variety of studies largely from USA and UK all focused on 3 common pathways

• Inequities in teaching		• Disengagement from school
• Narrowed teacher role • Lack of protection from bullying		• Engagement in risk behaviours for protection and identity[15].

Policy environment

- Schools should deliver health interventions now, in support of their mission to raise attainment
- But more supportive policy context would help
- -PSHE/SRE statutory subjects
- More emphasis in new Ofsted framework
- Metrics/league tables embrace wellbeing (as per PISA moves)
- National or regional healthy schools but with emphasis on evidence-based programmes

References

1. PSHE Association. Comments on the National Curriculum proposals published in February 2013 from the PSHE education Strategic Partners' Group. PHSEA; 2013.
2. Gove M. Education for economic success. Education World Forum; 11 January 2012; QEII Conference Centre, London2012.
3. Suhrcke M, de Paz Nieves C. The impact on health and health behaviours on educational outcomes in high income countries: a review of the evidence. Copenhagen: WHO Regional Office for Europe; 2011.
4. Masten A, Cicchetti D. Developmental cascades. Developmental and Psychopathology. 2010;22:491-5.
5. Bonell C, Jamal F, Harden A, Wells H, Parry W, Fletcher A, et al. Systematic review of the effects of schools and school environment interventions on health: evidence mapping and synthesis. Public Health Research. 2013;1(1).
6. Humphrey N. Social and Emotional Learning: A Critical Appraisal London: SAGE; 2013
7. Murray NG, Low BJ, Hollis C, Cross AW, Davis SM. Coordinated school health programs and academic achievement: A systematic review of the literature. J Sch Health. 2007;77:589-600.
8. Durlak JA, Weissberg RP, Dymnicki AB. The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions. Child Development. 2011;82(1):405-32.
9. Farahmand FK, Grant KE, Polo AJ, Duffy SN, Dubois DL. School-based mental health and behavioral programs for low-income, urban youth: a systematic and meta-analytic review. Clinical Psychology. 2011;18(4):372-90.
10. Heckman JJ, Stixrud J, Urzua S. The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior: Working Paper 12006. Cambridge MA: National Bureau of Economic Research; 2006.
11. Stewart WF, Ricci JA, Chee E, Morganstein D. Lost productive work time costs from health conditions in the United States: results from the American productivity audit. Journal of Occupational and Environmental Medicine. 2003;45(12):1234-46.
12. Langford R, Bonell CP, Jones HE, Pouliou T, Murphy SM, Waters E, et al. The WHO Health Promoting School framework for improving the health and well-being of students and their academic achievement. Cochrane Database of Systematic Reviews. 2014(4):Art. No.: CD008958. DOI: 10.1002/14651858.CD008958.