Loughborough University

The Role of Schools, Physical Activity and Physical Education in Addressing Mental Health

Dr Lorraine Cale

Presentation Aims

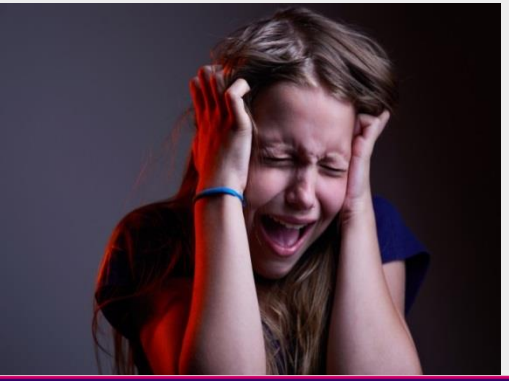
- To set the context for promoting mental health through schools, physical activity and physical education
- To review the evidence base supporting their role in mental health
- To highlight 2 research projects in the area:
  - Get to the Start Line: a programme designed to address adolescents' school-related stress and anxiety
  - Schools, Learning and Mental Health: a study of school-level factors and processes in Norway

Questions…

What was life like for you as an adolescent?

What's it like to be an adolescent these days?

What's it like to be a student in your school?



Context – Why Promote Mental Health?

- Growing concerns over the psychological well-being of young people
- Conditions such as suicide, depression, eating disorders and anxiety affect young people disproportionately compared to many other groups
- Evidence suggests a global prevalence of child and adolescent mental health disorders of approximately 20%
- In the UK:
  - ranked bottom on children's well-being out of 21 of the world's richest countries (UNICEF, 2007)
  - Approx. 30% of English adolescents report a low level of emotional wellbeing
  - Most recent statistics reveal 1 in 10 children to have a mental disorder

Context – Why Promote Mental Health?

Failure to support children and young people with mental health needs costs lives and money. Early intervention avoids young people falling into crisis and expensive and longer term interventions in adulthood (Department of Health, 2015)

Context – Why Schools?

- Studies highlight a link between high levels of school-related stress and high levels of health complaints
- Stress from the pressure of school work is particularly prevalent during adolescence
- There is growing evidence of a link between young people's health and well-being and their learning
- There is the need to equip young people with the competencies and skills to manage their stress

Context – The Role of Physical Activity

- Regular participation in physical activity has been found to be associated with improved psychological health in young people
- Physical activity focussed intervention studies have been found to achieve positive mental health outcomes in young people
- Given the evidence, the need for intervention programmes with a physical activity focus seems well justified
- Schools have been highlighted as an important context for these

Get to the Start Line

- Developed by the Youth Sport Trust https://www.youthsporttrust.org/
- An innovative school-based programme designed to address school-related stress and anxiety associated with examinations
- Programme aims:
  - i) to use physical activity to reduce the stress and anxiety of students in order to support improvements in academic attainment
  - ii) to increase understanding of stress and anxiety disorders affecting young people and the role of physical education and physical activity in reducing these

The Programme

- Coordinated by a school champion (a staff member) and delivered by an elite athlete mentor
- Delivered to selected Year 11 students (15-16 year olds)
- Comprised 6 workshops aimed to:
  - equip students with techniques/strategies to manage stress and anxiety
  - help students prepare and perform to the best of their abilities in their public examinations (GCSEs)
- Athlete mentors used their experiences of performing at a high level to support students
- See: https://www.youthsporttrust.org/get-start-line

Programme Evaluation

- Undertaken by Lorraine Cale and Jo Harris
- A mixed methods approach using qualitative and quantitative techniques
- A pre- and post-intervention design
- Ran from July 2015-September 2016
- Evaluation involved:
  - 6 schools from a county in the East Midlands, UK
  - selected Year 11 students identified as suffering from examination-related stress and anxiety
- 3 school visits (3-4 months apart) to conduct semi-structured focus groups/interviews with students/school champions
- Schools asked to provide student data (attendance; behaviour; referrals; attainment, inc. exam grades)
- An online survey to collect data from school champions and athlete mentors following each workshop

Findings – Headlines

- The programme was positively received by most students
- There was an overall reduction in the number of referrals
- For a few students associations could be drawn with reductions in examination-related stress and anxiety
- The vast majority performed at the same level or better than expected in their examinations
- The programme reduced examination-related stress and anxiety for a few students and these individuals performed better than predicted in their examinations
- The programme increased understanding of examination-related stress and anxiety affecting students
- See: https://www.youthsporttrust.org/do-we-have-young-people%E2%80%99s-future-mind

Findings

- The schools were motivated to be involved in the programme for a number of reasons:
  - mental health amongst young people was perceived as a ‘real’ issue
  - schools could readily identify students suffering from stress and anxiety
  - the programme offered an additional opportunity to support anxious students
  - the programme was different

- Many students:
  - appreciated the school offering them targeted support
  - were positive about it being delivered by ‘inspiring’ athletes
  - particularly enjoyed the practical and group activities
  - appreciated the ‘positive’ style of the intervention and the support of a school champion

- The group dimension made students realise they were ‘not alone’

Findings

- School champions generally considered that:
  - the benefits of the programme were significant for some students
  - they benefitted from the professional development the programme offered
  - the content was appropriate
  - the practical activities and group tasks effectively engaged students
  - the athlete-mentors were inspiring and developed good relationships with students
  - students were generally (more) receptive to external deliverers
- Schools were generally positive about the sustainability of the programme, with some planning to integrate aspects into the curriculum and make some changes

Findings – Challenges/Limitations

- Most viewed the impact of the programme to be limited, with most students not using the techniques/strategies they had learned
- The programme had little effect on students' physical activity levels or understanding
- Various challenges and limitations with the programme itself were identified, for example:
  - concerns over the time needed to be given
  - variable delivery
  - selection of students
  - lack of engagement by some students
  - stigma attached to being involved
  - lack of personalisation
  - abstract nature of some of the content
  - involving less physical activity than expected

Recommendations

- Ensure that ALL fully understand what the programme is for and what it involves
- Provide clear guidance regarding student selection
- Target the programme at younger students (e.g. Years 9/10; 13-15 year olds)
- More careful selection of athlete mentors
- Ensure that the programme:
  - provides students with explicit help and a broad range of techniques and strategies
  - incorporates individual target-setting
  - includes more physical activity and interactive tasks
  - provides more opportunities for self-reflection/drawing on personal experiences
  - is inclusive and assists students in dealing with abstract/philosophical concepts
  - helps students apply coping techniques/strategies to exam-related situations

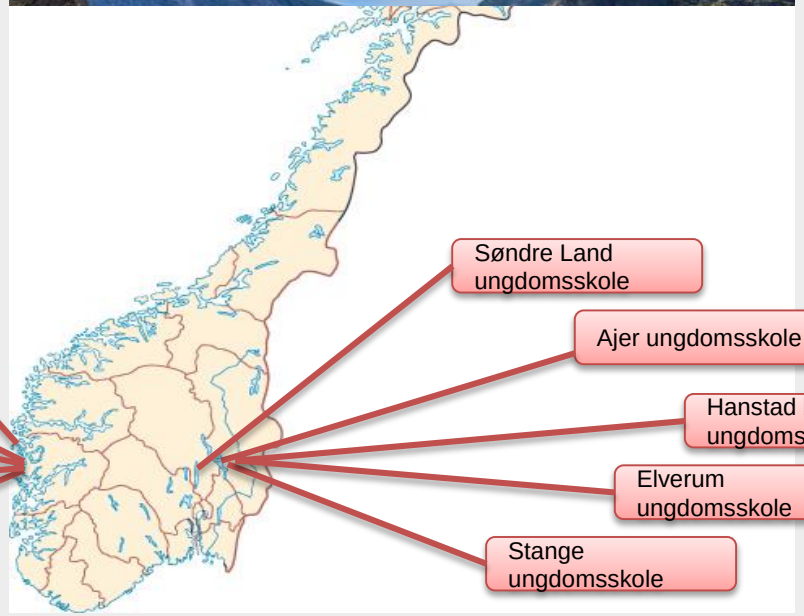
Summary

- The aims of Get to the Start Line are well founded in the literature
- The programme represents an innovative approach to addressing school-based stress amongst adolescents
- In practice, the programme lacked an explicit physical activity focus
- Whilst the findings are mixed and further research is needed, the programme did result in some positive outcomes
- The findings are clearly encouraging

Schools, Learning and Mental Health: a Study of School-level Factors and Processes in Norway

- A Norwegian Research Council funded project
- Running from 2016-2019
- Researchers from Hedmark University of Applied Sciences (Miranda Thurston)
- Bergen University (Oddrun Samdal)
- Norwegian School of Sport Sciences (Sigmund Anderssen)
- University of Chester (Ken Green)
- Loughborough University (Lorraine Cale)
- National Centre for Food, Health and Physical Activity (Hege Tjomsland)

Norwegian Context



Øygarden ungdomsskule

Ny-Krohnborg ungdomsskole

Blokkhaugen ungdomsskole

Rothaugen ungdomsskole

Storetveit ungdomsskole

Søndre Land ungdomsskole

Ajer ungdomsskole

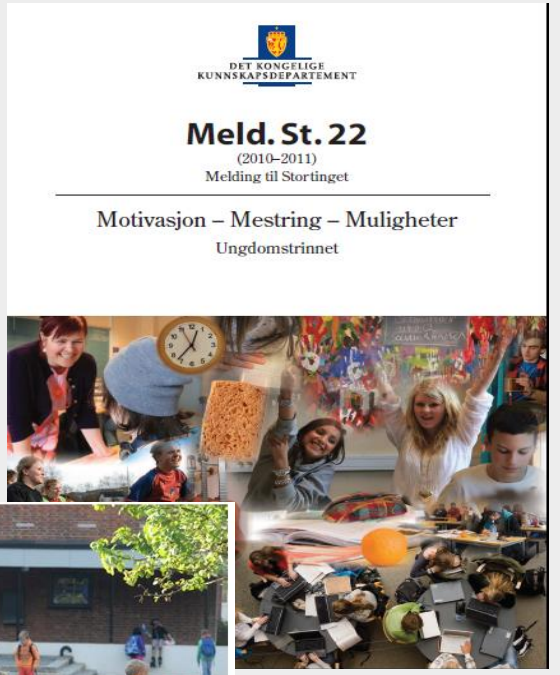
Hanstad barne- og ungdomsskole

Elverum ungdomsskole

Stange ungdomsskole

Norwegian Context

- The role of schools and importance of an environment that promotes health, well-being and learning recognised in policy (Education Act, 2003)
- Similar concerns and issues concerning young people's mental health
- Becoming a multicultural nation
- Highly ranked in health, wealth and prosperity indices



Only five percent of children with Norwegian parents live in poverty. Photo: Terje Pedersen / NTB scanpix

Four of ten immigrant children in Norway live in poverty

Published: 11 Aug 2016 10:08 GMT+02:00

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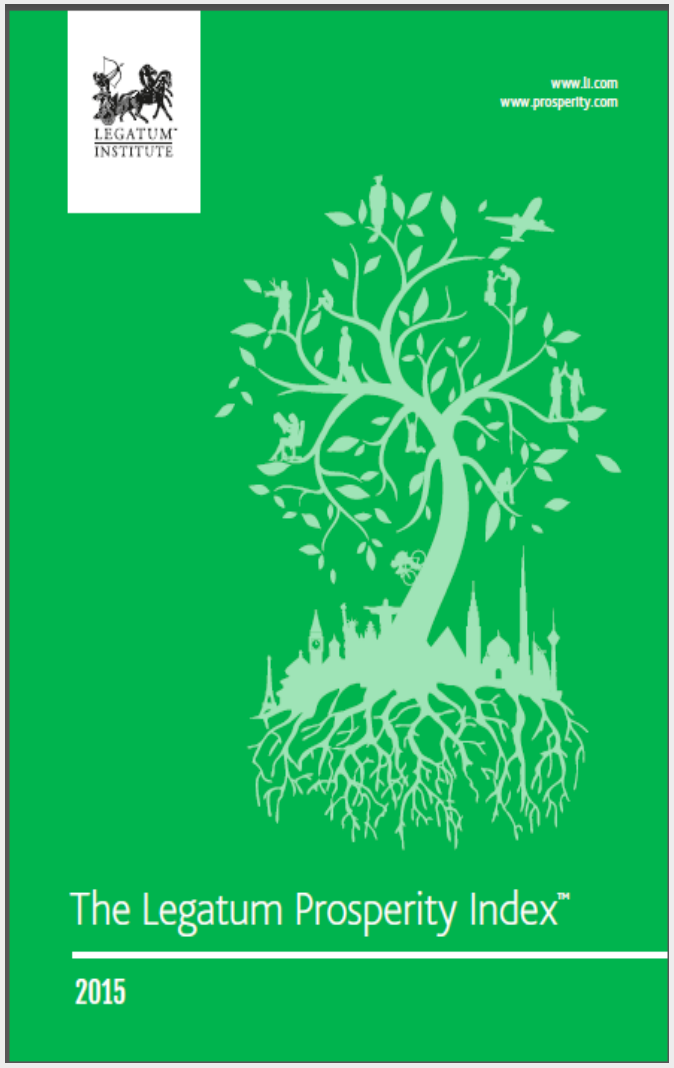
A new report shows that 36 percent of immigrant children live in poverty in Norway today, compared to just five percent of children with Norwegian parents.

- Record number of foreign workers leave Norway (01 Jun 16)
- Norway sees immigration numbers drop (12 May 16)
- Norway 'best in Scandinavia' at integration: report (07 Apr 16)



Norway Has More Money Than It Knows What To Do With

Pierre-Henry Deshayes, Agence France Presse
Sep. 8, 2013, 4:32 PM 111,670 44

Norway, which goes to the polls on Monday, is an island of prosperity in Europe, with so much money that it literally doesn't know what to do with it.

The Nordic country faces an embarrassment of riches as it tries to figure out how to spend its huge pile of oil money without damaging the economy in the long run.

"All countries around us are forced to reduce their spending," said Oeystein Doerum, chief economist at Norway's largest bank DNB

A man jogs in front of a cabin at a fjord near Honningsvaag, northern Norway, on June 7, 2013. Pierre-Henry Deshayes/AFP

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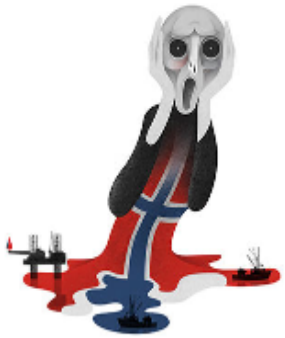
Norwegian blues

Now the easy times are over, Norway must rediscover its Viking spirit

Oct 10th 2015 | From the print edition



IT IS a capitalist country but it is dominated by state-owned enterprises; it is an oil giant but it eschews conspicuous consumption. For decades this unusual economic model has served Norway well: in 1970 it was in Europe's middle ranks as measured by income per head. Nowadays, Norwegians are richer than everyone in Europe except the Luxembourgers. However, the model is beginning to run out of fuel.

Norway's rise to glory began when the first oil was extracted from its continental shelf in 1971. The energy industry sent ripples of prosperity throughout the economy, turning Bergen from a fishing village into an industrial hub, creating companies that specialised in extracting hydrocarbons from beneath a stormy sea and filling hotels with oil workers. The ripples got ever bigger as the oil price lurched upwards from $10 a barrel in the late 1990s to almost $150 in 2008. Oil and gas now account for about a quarter of Norway's GDP and almost half of its exports.

TABLE 1

Human Development Index and its components

TABLE 1

HDI rank	Human Development Index (HDI) Value 2014	Life expectancy at birth (years) 2014	Expected years of schooling (years) 2014[a]	Mean years of schooling (years) 2014[a]	Gross national income (GNI) per capita (2011 PPP $) 2014	GNI per capita rank minus HDI rank 2014
VERY HIGH HUMAN DEVELOPMENT						
1 Norway	0.944	81.6	17.5	12.6[b]	64,992	5
2 Australia	0.935	82.4	20.2[c]	13.0	42,261	17
3 Switzerland	0.930	83.0	15.8	12.8	56,431	6
4 Denmark	0.923	80.2	18.7[c]	12.7	44,025	11
5 Netherlands	0.922	81.6	17.9	11.9	45,435	9
6 Germany	0.916	80.9	16.5	13.1[d]	43,919	11
6 Ireland	0.916	80.9	18.6[c]	12.2[e]	39,568	16
8 United States	0.915	79.1	16.5	12.9	52,947	3
9 Canada	0.913	82.0	15.9	13.0	42,155	11
9 New Zealand	0.913	81.8	19.2[c]	12.5[b]	32,689	23
11 Singapore	0.912	83.0	15.4[f]	10.6[e]	76,628[g]	–7
12 Hong Kong, China (SAR)	0.910	84.0	15.6	11.2	53,959	–2
13 Liechtenstein	0.908	80.0[h]	15.0	11.8[i]	79,851[gi]	–10
14 Sweden	0.907	82.2	15.8	12.1	45,636	–1
14 United Kingdom	0.907	80.7	16.2	13.1[d]	39,267	9
16 Iceland	0.899	82.6	19.0[c]	10.6[e]	35,182	12
17 Korea (Republic of)	0.898	81.9	16.9	11.9[e]	33,890	13
18 Israel	0.894	82.4	16.0	12.5	30,676	16
19 Luxembourg	0.892	81.7	13.9	11.7	58,711	–11
20 Japan	0.891	83.5	15.3	11.5[e]	36,927	7
21 Belgium	0.890	80.8	16.3	11.3[d]	41,187	0
22 France	0.888	82.2	16.0	11.1	38,056	4
23 Austria	0.885	81.4	15.7	10.8[d]	43,869	–5
24 Finland	0.883	80.8	17.1	10.3[e]	38,695	0

Two Inter-related Work Packages:

- Work package 1:
  - To explore and undestand how physical activity as an individual and school level factor might be related to mental wellbeing and academic achievement

- Work package 2:
  - To explore how physical education (curriculum subject) and physical activity (extracurricular) processes and practices shape young people's mental health (and learning)

Both are concerned with how mental wellbeing, physical activity and academic achievement vary by school, and what factors and processes might be significant in explaining any variation

Broad Conceptual Background

- Schools vary in terms of:
  - levels of academic achievement
  - levels of health of pupils, including mental health and levels of physical activity
- Is this related to the composition of the school population or school-level factors and processes?

- Little research on 'school effects' on cognitive and non-cognitive outcomes in Norway
- Schools that are effective in enhancing achievement may not necessarily be effective in enhancing well-being
- Schools as social institutions

WP 1 – Longitudinal Cohort Study

- How *physical activity, as an individual and a school level factor,* might be related to *mental wellbeing* and *academic achievement*
  - To what extent does mental well-being and physical activity vary across schools?
  - What are the individual-level and school-level factors that are associated with individuals' mental well-being and physical activity levels?
  - How do these patterns and relationships vary over time?
  - Does mental well-being predict academic achievement?
  - What is the relationship between physical activity, mental well-being and academic achievement?

Key Aspects of Study 1

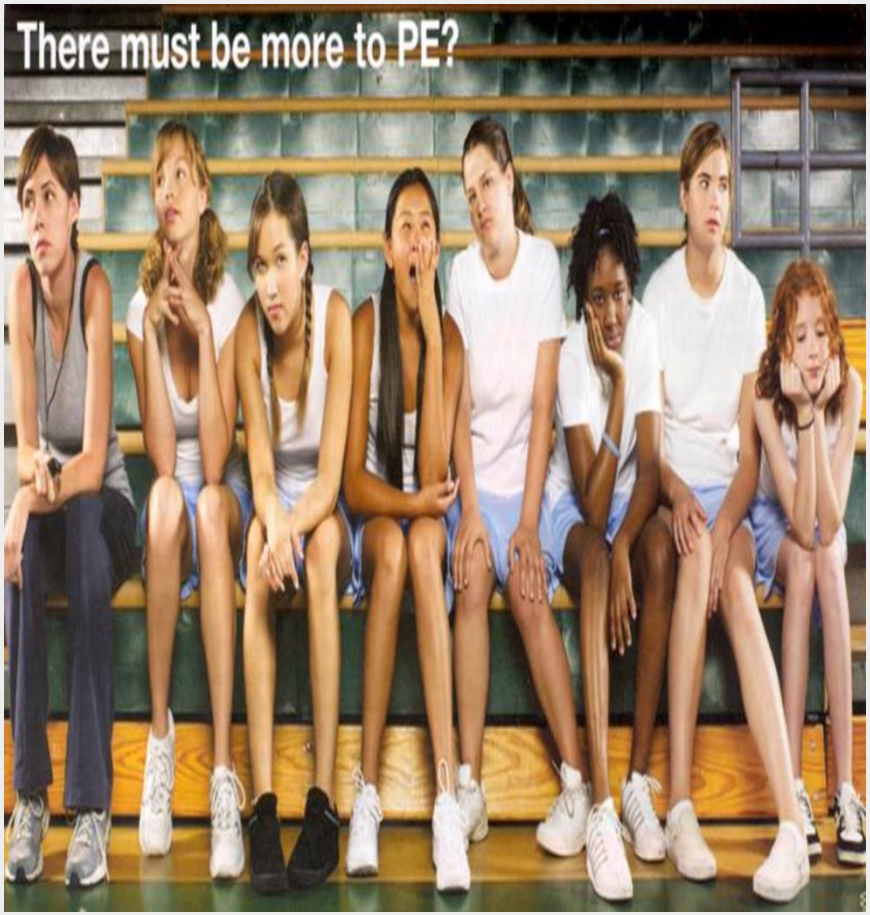
- Students from 10 schools in grades 8-10 (13-15 year olds)
  - Started with grade 8 students in Autumn 2016
  - Will follow these students as they progress through school

- Annual questionnaire in Autumn 2016, 2017, 2018
- Measurement of individual, family and school variables, including mental well-being
- Annual measurement of physical activity (7 days) using an accelerometer
- Annual measurement of health variables (e.g. height, weight)
- Annual recording of academic grades

WP 2 – Processes and Practices of Physical Education and Physical Activity

- *What, if any, contribution does school physical education in Norway make to young people's (mental) health and well-being?*
- How do students view physical education in terms of their mental health and well-being?
- What do students view as the mechanisms (if any) by which physical education can and does impact upon their mental health and well-being?
- Does the subject meet expectations to inspire lifelong enjoyment of sport and physical activity for everyone?

Physical Education and Physical Activity: Processes and Practices

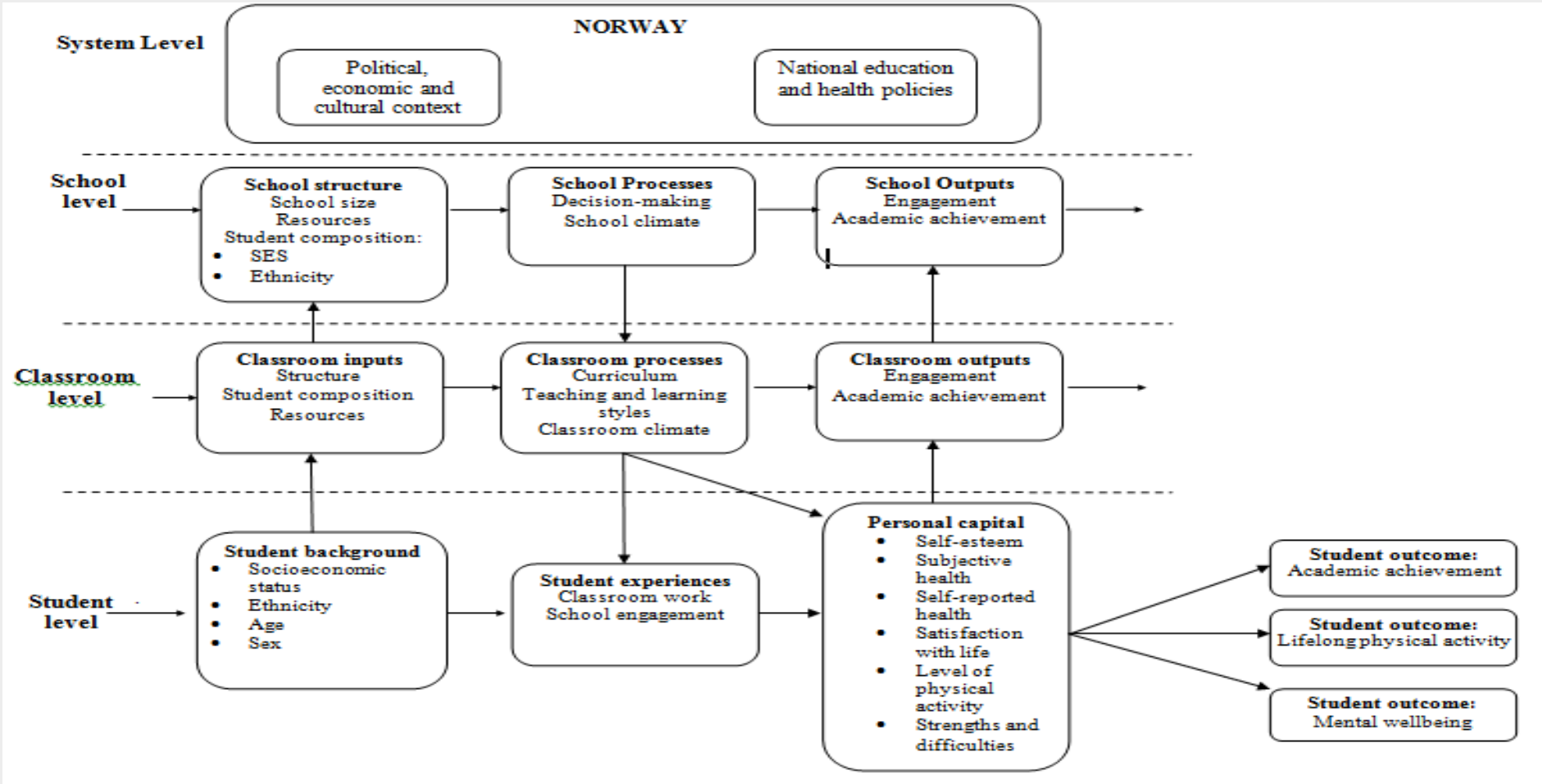


- Qualitative
- Observation
- Focus groups with students
- Interviews with teachers
- Practices:
  - Assessment and feedback
  - Student centred
  - ?

Concluding Thoughts…

- Two different approaches to an important issue
- One focussed on addressing the issue via intervention (treatment), the other on understanding it (with a view to prevention)
- Both highlight:
  - the need for further research in the area
  - the potential for schools, physical activity and physical education to make a difference

A Multilevel Conceptual Framework for Analyzing School Factors on Mental Well-being, Lifelong Physical Activity and Academic Achievement



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