



School Physical Fitness Award Scheme 學校體適能獎勵計劃



Co-organised by:
合辦機構



教育局
Education Bureau



Supported by:
支持機構



Analysis of data from School Physical Fitness Award Scheme

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School Physical Fitness Award Scheme

- Co-organised by Hong Kong Childhealth Foundation, EDB, and Physical Fitness Association in 1990
- More than 448 primary and secondary schools participated
 - Covering >200,000 students
- 269 schools using the online system and uploaded students' data
 - 156,963 students



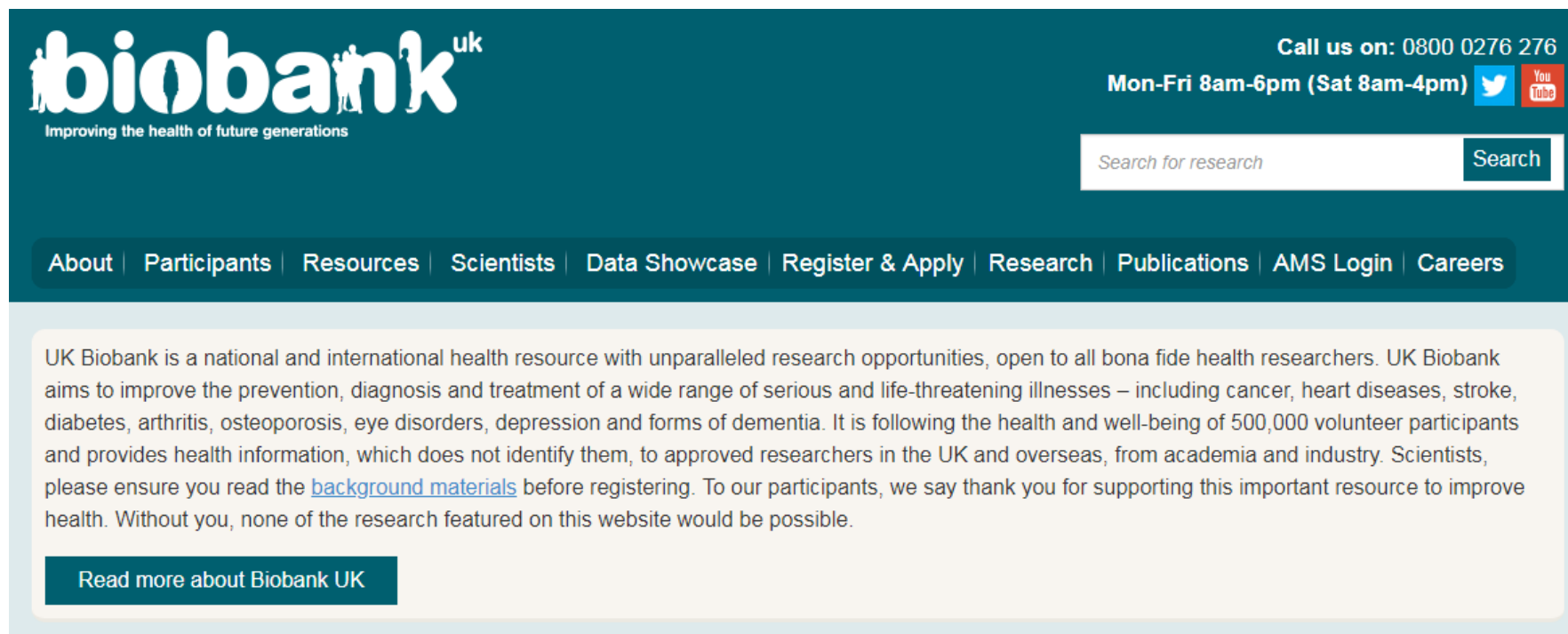
Data collection is hard work...

- Teachers and schools are spending significant efforts and resources to collect the data
 - Teaching time
 - Planning for physical fitness tests
 - Executing the tests
 - Data entry
 - Data upload
 - Technical issues
 - ...

- But we think the data you collected will make a difference -



Experience in the UK...



The screenshot shows the UK Biobank website homepage. At the top left is the logo "biobank^{uk}" with the tagline "Improving the health of future generations". To the right, contact information is provided: "Call us on: 0800 0276 276" and "Mon-Fri 8am-6pm (Sat 8am-4pm)", accompanied by Twitter and YouTube icons. Below this is a search bar with the placeholder text "Search for research" and a "Search" button. A navigation menu contains links for "About", "Participants", "Resources", "Scientists", "Data Showcase", "Register & Apply", "Research", "Publications", "AMS Login", and "Careers". The main content area features a paragraph about the biobank's mission and a "Read more about Biobank UK" button.

biobank^{uk}
Improving the health of future generations

Call us on: 0800 0276 276
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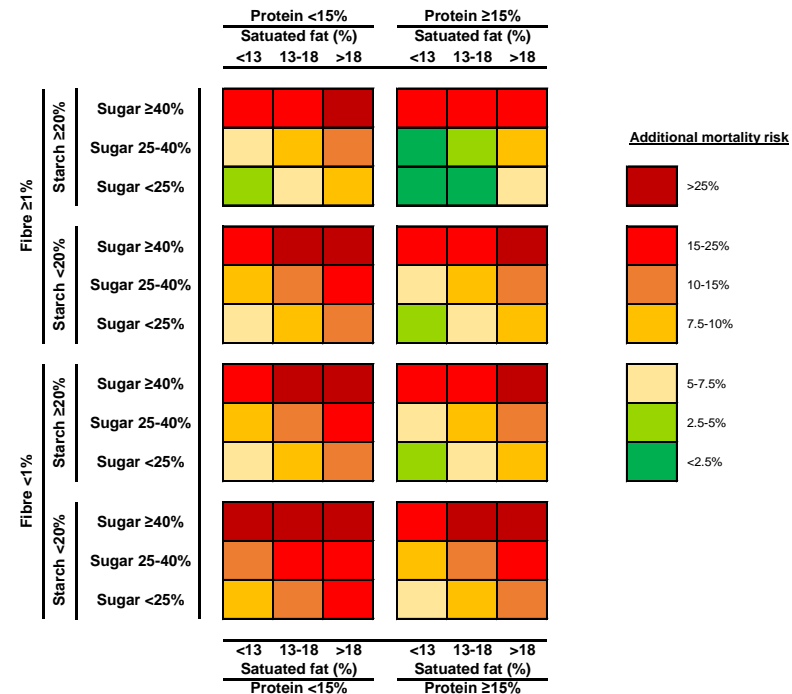
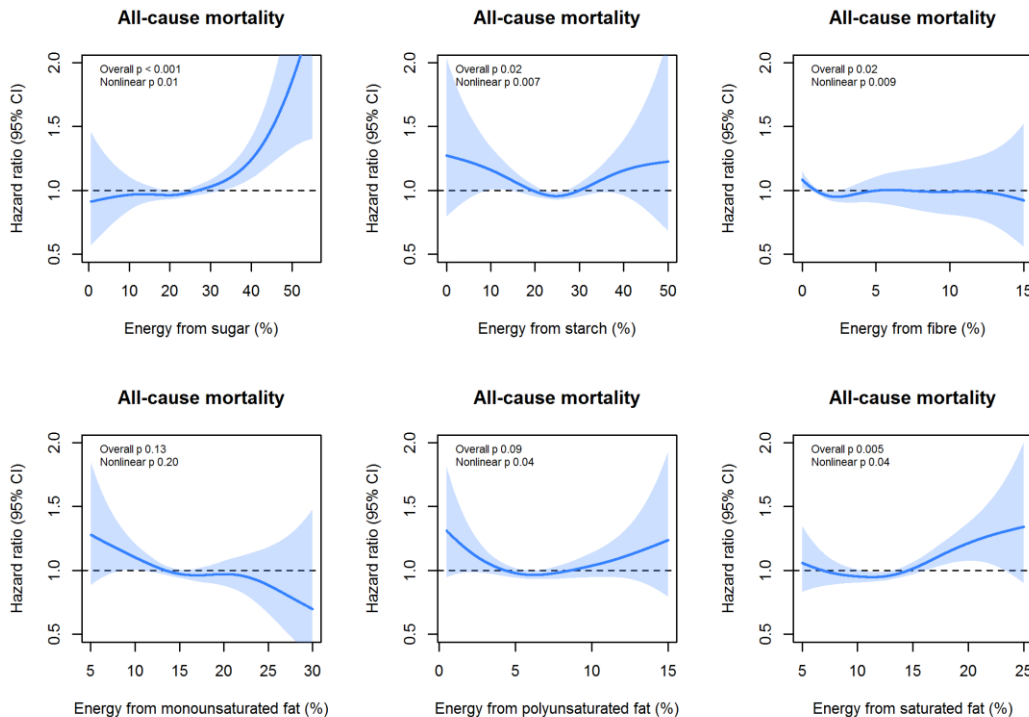
Search for research

[About](#) | [Participants](#) | [Resources](#) | [Scientists](#) | [Data Showcase](#) | [Register & Apply](#) | [Research](#) | [Publications](#) | [AMS Login](#) | [Careers](#)

UK Biobank is a national and international health resource with unparalleled research opportunities, open to all bona fide health researchers. UK Biobank aims to improve the prevention, diagnosis and treatment of a wide range of serious and life-threatening illnesses – including cancer, heart diseases, stroke, diabetes, arthritis, osteoporosis, eye disorders, depression and forms of dementia. It is following the health and well-being of 500,000 volunteer participants and provides health information, which does not identify them, to approved researchers in the UK and overseas, from academia and industry. Scientists, please ensure you read the [background materials](#) before registering. To our participants, we say thank you for supporting this important resource to improve health. Without you, none of the research featured on this website would be possible.

[Read more about Biobank UK](#)

... using data to formulate nutritional guideline



Can we also do something in Hong Kong? Using the SPFAS?



A 4-year longitudinal study

	2013/14	
	Boys (N=9935)	Girls (N=9569)
Age, n (%), years		
6	2342 (23.6)	1889 (19.7)
7	2547 (25.6)	2393 (25.0)
8	3194 (32.1)	4053 (42.4)
9	1852 (18.6)	1234 (12.9)
10	0 (0.0)	0 (0.0)
11	0 (0.0)	0 (0.0)
12	0 (0.0)	0 (0.0)
13	0 (0.0)	0 (0.0)
Body weight status, n (%)		
Underweight	298 (3.0)	316 (3.3)
Normal weight	7402 (74.5)	7435 (77.7)
Obese	1510 (15.2)	1397 (14.6)
Overweight	725 (7.3)	421 (4.4)
Physical fitness tests, mean (SD), z-scores		
Handgrip test	0.24 (1.04)	0.27 (1.09)
One-minute sit-up test	-0.01 (1.13)	0.05 (1.12)
Sit-and-reach test	-0.12 (1.17)	-0.07 (1.14)
Endurance run test	0.14 (1.03)	0.20 (1.09)

Using the linked longitudinal data from SPFAS,
we constructed a primary school cohort



Categorising students into:

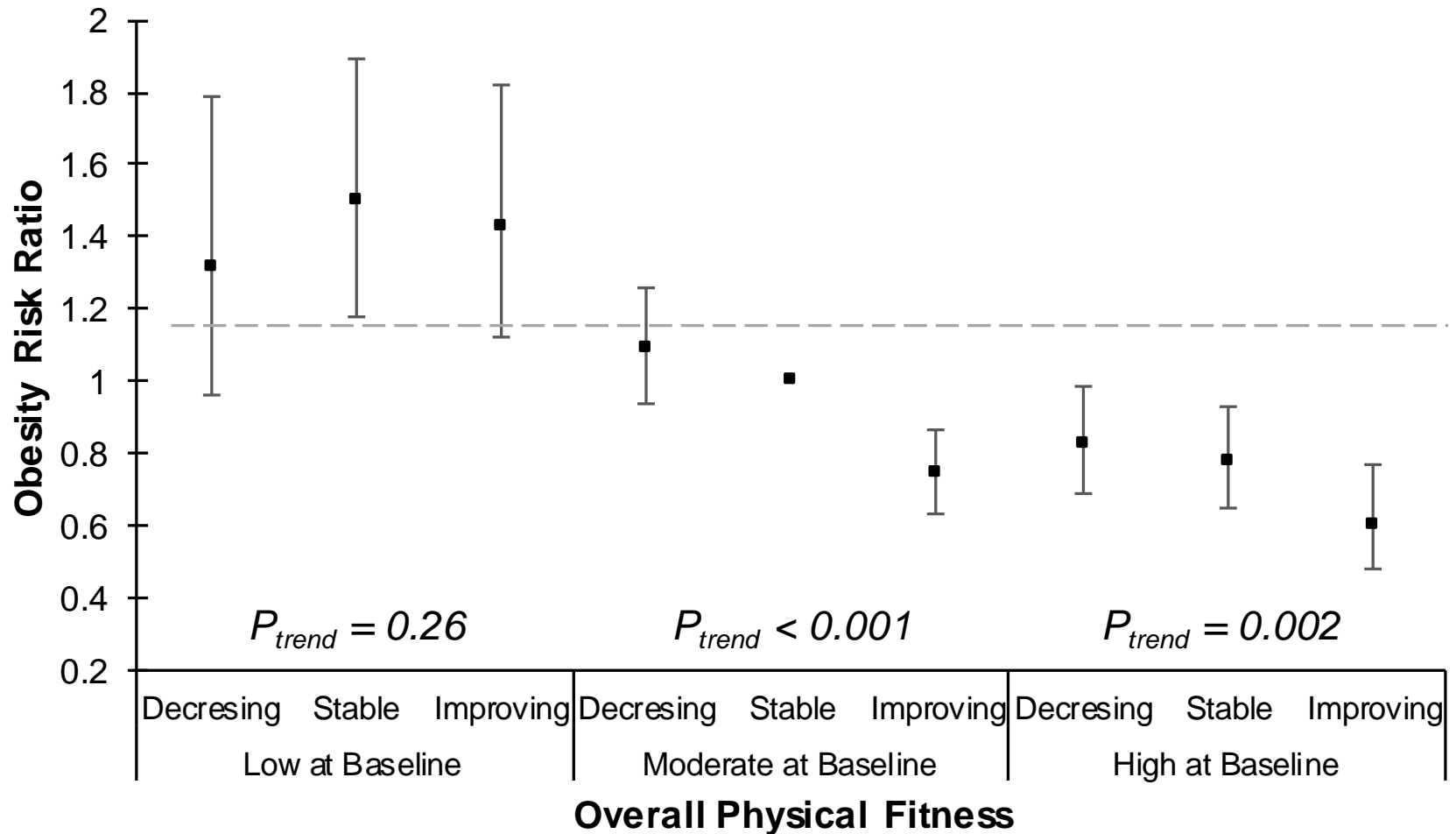
Fitness groups

	n	%
Low fitness at baseline		
Decreasing	554	2.8
Stable	1210	6.1
Increasing	794	4.0
Moderate fitness at baseline		
Decreasing	2159	10.9
Stable	4315	21.7
Increasing	2480	12.5
High fitness at baseline		
Decreasing	2236	11.2
Stable	3904	19.6
Increasing	2236	11.2

Body weight groups

	n	%
Underweight at baseline		
Decreasing	194	1.0
Stable	199	1.0
Increasing	236	1.2
Normal at baseline		
Decreasing	4007	20.1
Stable	6551	32.9
Increasing	4585	23.1
Overweight at baseline		
Decreasing	728	3.7
Stable	1510	7.6
Increasing	715	3.6
Obese at baseline		
Decreasing	278	1.4
Stable	635	3.2
Increasing	250	1.3

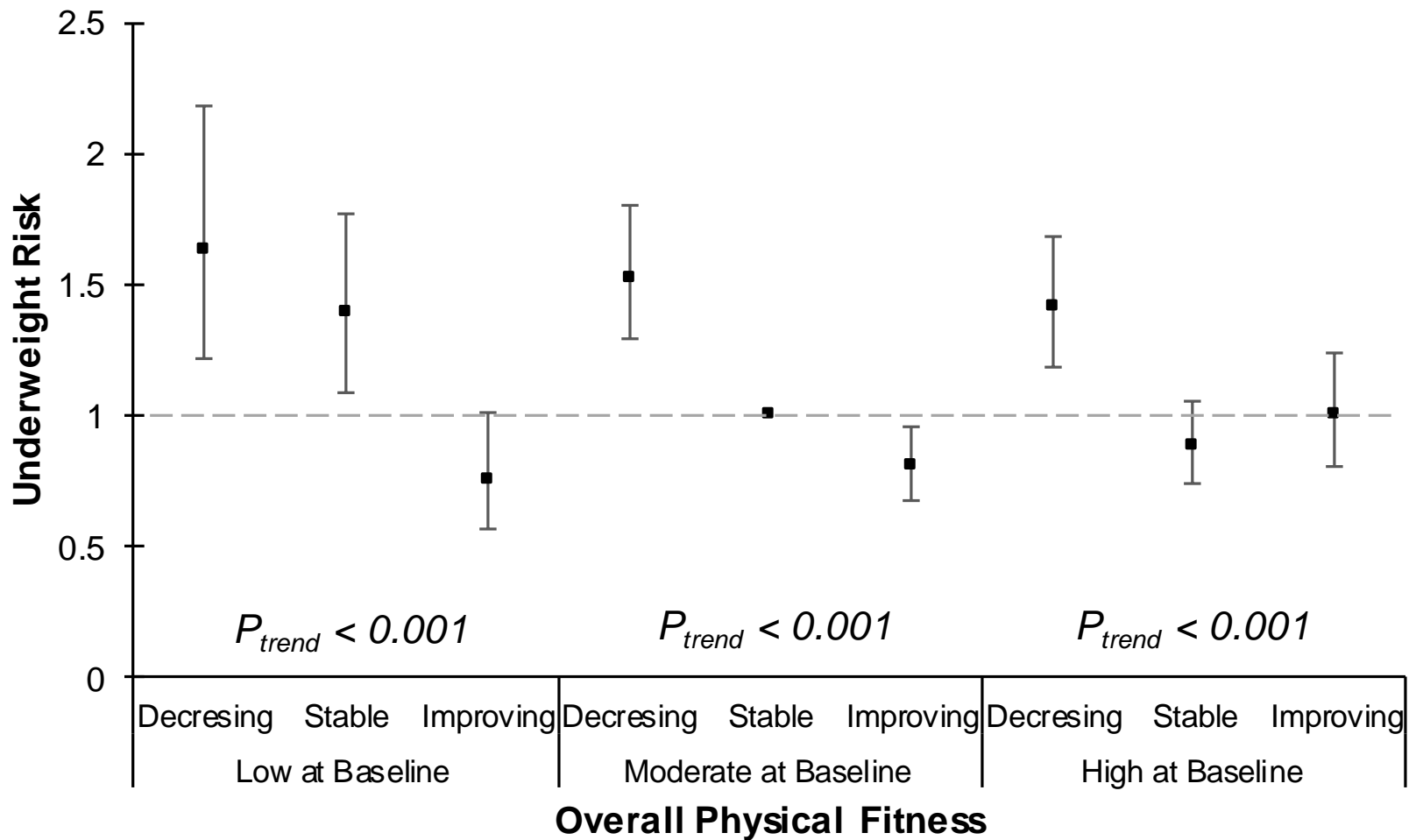
Obesity Risk Predicted by Physical Fitness Trajectory



Physical fitness and its trend is highly predictive of body weight
 Better fitness, higher chance to have healthy body weight



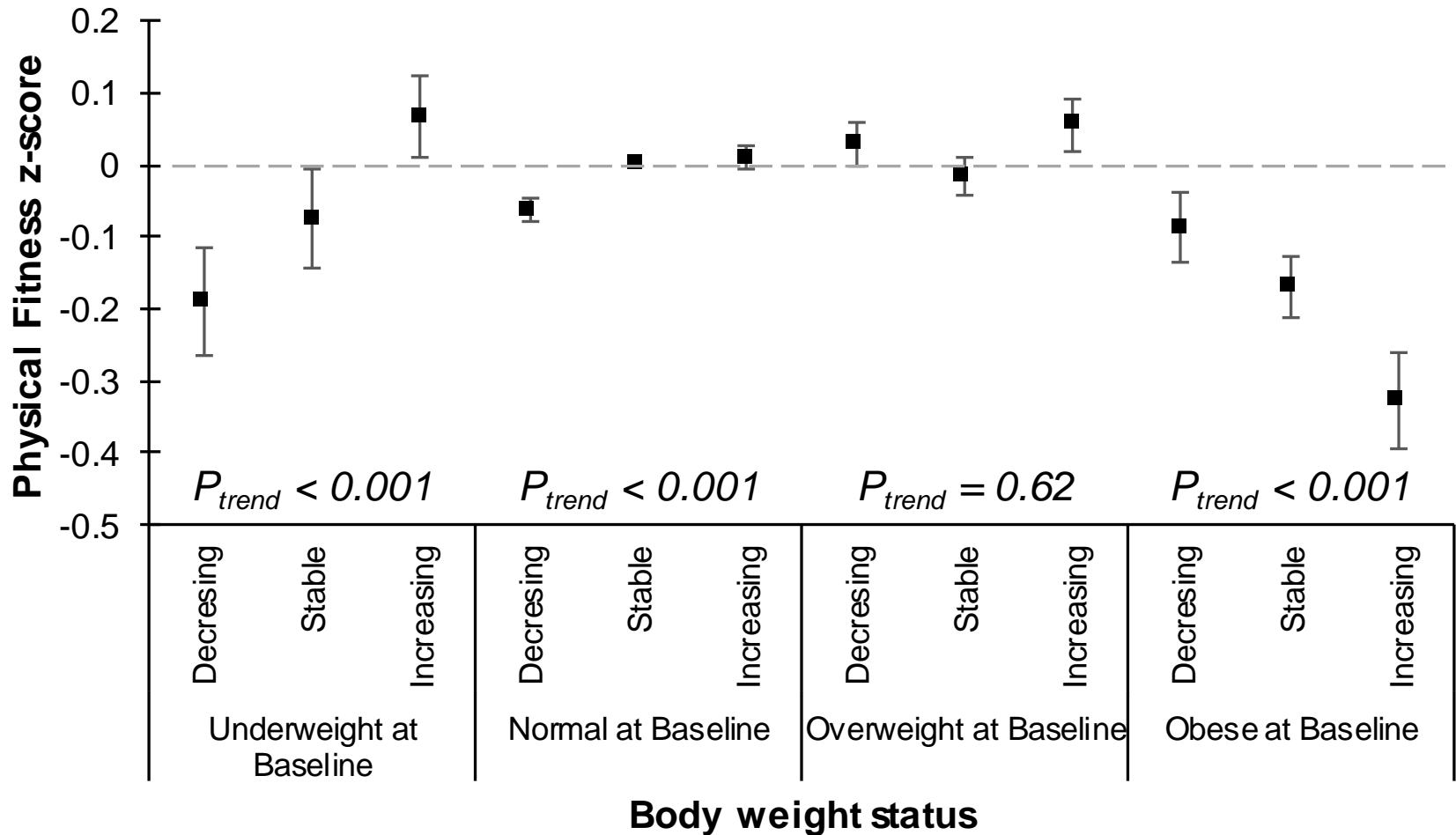
Underweight Risk Predicted by Physical Fitness Trajectory



Better fitness, higher chance to have healthy body weight



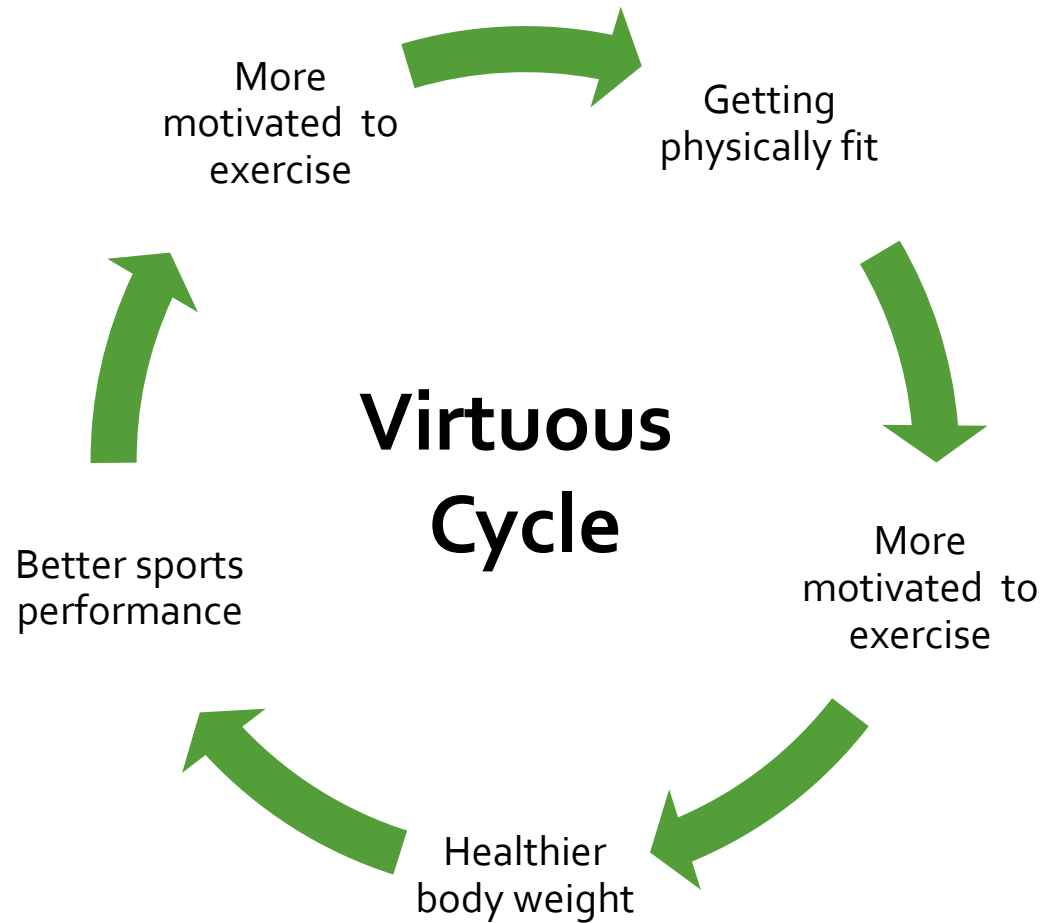
Physical Fitness Predicted by Body Weight Trajectory



Healthier body weight, higher chance to be physically more fit



What does it mean?



What does it mean?

- Promoting physical fitness in schools is important to ensure our next generation is healthy
 - Fitter -> Less obesity -> lower risk of diabetes, cardiovascular disease, etc.
- While participating in SPFAS is hard work, it is meaningful:
 - Understanding the fitness and health situation in your school
 - Getting recognition for your efforts
 - Better insight to tailor physical education lessons and extra-curricular programmes
 - Contribute to understand how we can improve the health of our next generation
- We encourage you to:
 - Invite other schools to join SPFAS
 - Provide unique, linkage student identifiers to help linking up the yearly data





In order for man to succeed in life, God provided him with two means, education and physical activity. Not separately, one for the soul and the other for the body, but for the two together.

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