



Correlates and Implications of High Screen Time among High and Low Active Irish Nine-Year Olds

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Does screen time(ST) predict overweight/obesity(OW/obesity) independently of physical activity(PA) in 9 year old children?

27% of
Irish children
OW/obese



Research Questions

- **RQ1** What is the combined influence of ST and PA on risk of OW/obesity in a large nationally representative cohort of 9 year old Irish school children?
- **RQ2** Even in sufficiently active children, is high ST a risk factor for OW/obesity ?
- **RQ3** What are the correlates of high ST?



Method

- Growing Up in Ireland Study: longitudinal study to describe lives of Irish children (infant and child cohort)
- Total N = 8568 nine-year olds (49% boys) and their parents
- Randomly selected to ensure geographical representation; 57% response
- Parental report of child PA (participation in hard exercise over a two week period-Leisure Time Exercise Questionnaire), TV time, presence of electronic equipment in the child's room, sport club membership, mobile phone ownership, activities with parents
- Social class, gender
- Objectively measured BMI

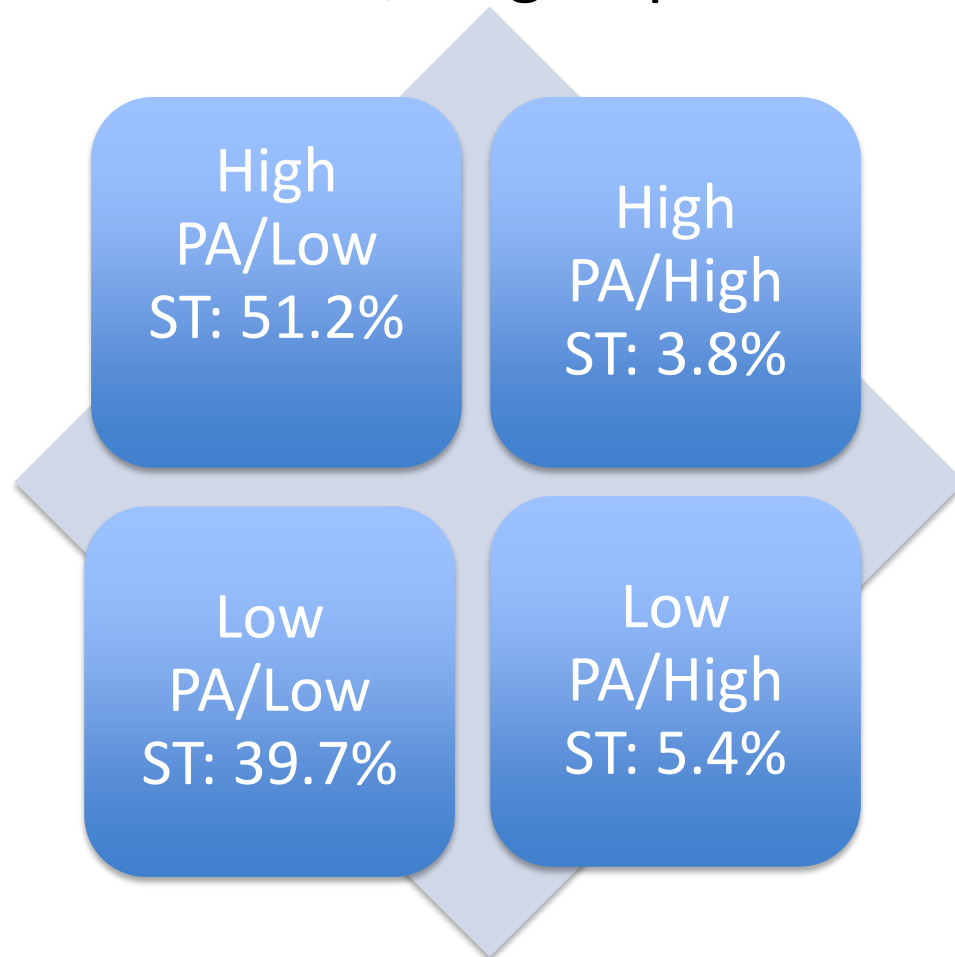
Method – Analysis

	Description
High PA	>9 bouts of hard exercise over 2 weeks
Low PA	0-8 bouts of hard exercise over 2 weeks
High ST	>3 hours of screen time per day
Low ST	<3 hours of screen time per day
OW/Obese	BMI \geq 19.1 boys BMI \geq 19.07 girls
Normal/Underweight	BMI <19.1 boys BMI < 19.07 girls

Chi squared statistics and forced entry logistic regression was used to identify factors associated with OW/obesity and with ST . Data presented as adjusted odds ratios.

Combined Categories

To assess the combined influence of PA and ST on OW/obesity, children were categorised into one of four ST/PA groups



Predictors of OW/Obesity		Overall Sample Adjusted OR (95% CI) n=7035	High PA Adjusted OR (95% CI) n=3860	Low PA Adjusted OR (95% CI) n=3175
Gender	Boys Girls	1 1.41 (1.25-1.60)^	1 1.30 (1.09-1.55)^	1 1.51 (1.27-1.80)^
Social Class	SC 1-2 SC 3-4 SC 5-6	1 1.18 (1.04-1.34)^ 1.33 (1.089-1.62)^	1 1.24 (1.03-1.48)^ 1.26 (.94-1.68)	1 1.11 (.93-1.33) 1.39 (1.05-1.85)^
Hard Exercise	9+ times None/1-2 times	1 1.38 (1.11-1.73)^		
Screen Time	None/less than 1 hr 1-3 hrs >3 hrs	1 1.18 (1.04-1.38)^ 1.78 (1.43-2.22)^	1 1.16 (.96-1.41) 1.78 (1.29-2.47)^	1 1.21 (.99-1.50) 1.77 (1.31-2.39)^
TV in Bedroom	No Yes	1 1.38 (1.19-1.59)^	1 1.32 (1.07-1.61)^	1 1.45 (1.19-1.77)^
Mobile Phone	No Yes	1 1.41 (1.24-1.59)^	1 1.56 (1.31-1.86)^	1 1.26 (1.06-1.50)^
Combined Categories	Low ST/High PA Low ST/Low PA High ST/High PA High ST/Low PA	1 1.38 (1.22-1.56)^ 1.63 (1.23-2.18)^ 2.07 (1.62-2.66)^		

Results (and take home messages!)

- **RQ1 Combined influence of ST and PA on risk of OW/obesity?** Compared to the reference group of low ST/high PA, children who reported low ST and low PA had a 38% increased risk ($p < .05$) of OW/obesity while children who **maintained high PA but high ST** had a **63% increased risk** ($p < .05$).
- Children in the high ST/low PA category were twice as likely to be OW/obese ($OR = 2.07$) than the reference group.
- Reinforces findings in older children : sedentarism is a predictor of weight gain independent of PA status. This justifies efforts to reduce sedentary behaviour as part of existing public health initiatives.

- RQ2 Is high ST a risk factor for OW/obesity even in sufficiently active children? Even in high active 9 year old children, ST a predictor of OW/obesity (>3 hours ST, OR 1.78; 1-3 hours, OR 1.16).
- RQ3: Correlates of high ST? Regardless of PA status, technology in bedroom and having a mobile phone associated with higher screen time.

The message for parents of 9 year olds? Learn to say 'No'!

31/8/11

A NEW SURVEY of Irish parents has shown that over a third of children aged 8 now owns a mobile phone –

