



MyBreakfast Study of School Children:

Findings, Implications & Solutions

SYMPOSIUM

Presentation 7:

Breakfast Intake, Bodyweight Status and Associations with Physical Activity Level

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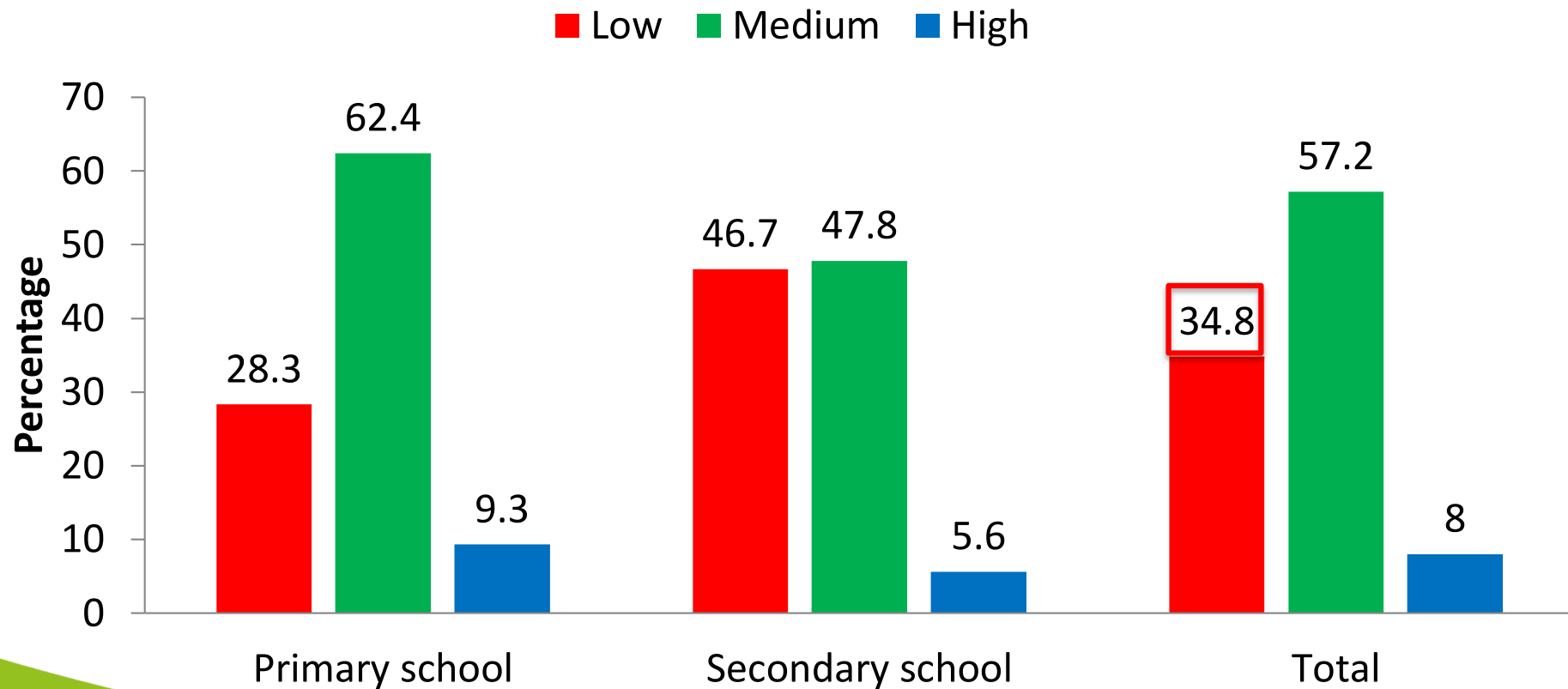
Introduction

- Physical activity level among school children has been found to be low in previous cross-sectional studies in the country:
 - 2007 → 35.5% of adolescents in Kuantan, Pahang had low physical activity level (Dan, Mohd Nasir & Zalilah, 2007)
 - 2011 → the prevalence of low physical activity level among adolescents from the same district was 74.7% (Farah Wahida, Mohd Nasir & Hazizi, 2011)
- Low energy expenditure has been found to be associated with overweight and obesity among Malaysian children and adolescents aged 11 to 15 years (Zalilah et al., 2006).
- This study aimed to determine physical activity pattern and its association with socio-demographic background, bodyweight status and breakfast consumption among 6 to 17 year-old school children and adolescents in Malaysia.

Findings #1

1 in 3 school children had low physical activity level

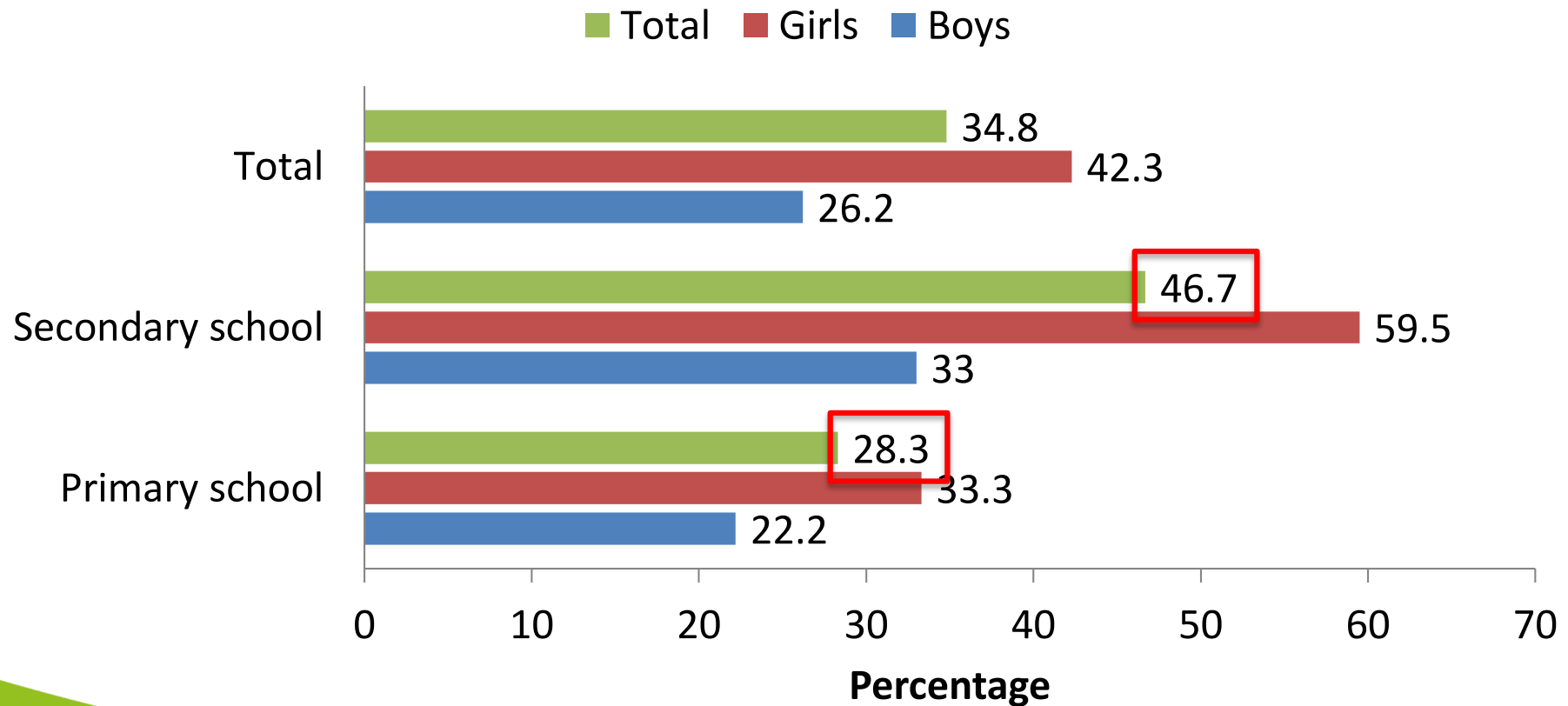
Distribution of Physical Activity among the Children
(Primary school, $n=5556$; Secondary school, $n=3075$; Total, $n=8631$)



Findings #2

The prevalence of low physical activity level among secondary school children was almost double that of primary school children

Prevalence of Low Physical Activity Among Boys and Girls
(Primary school, n=5556; Secondary school, n=3075; Total, n=8631)



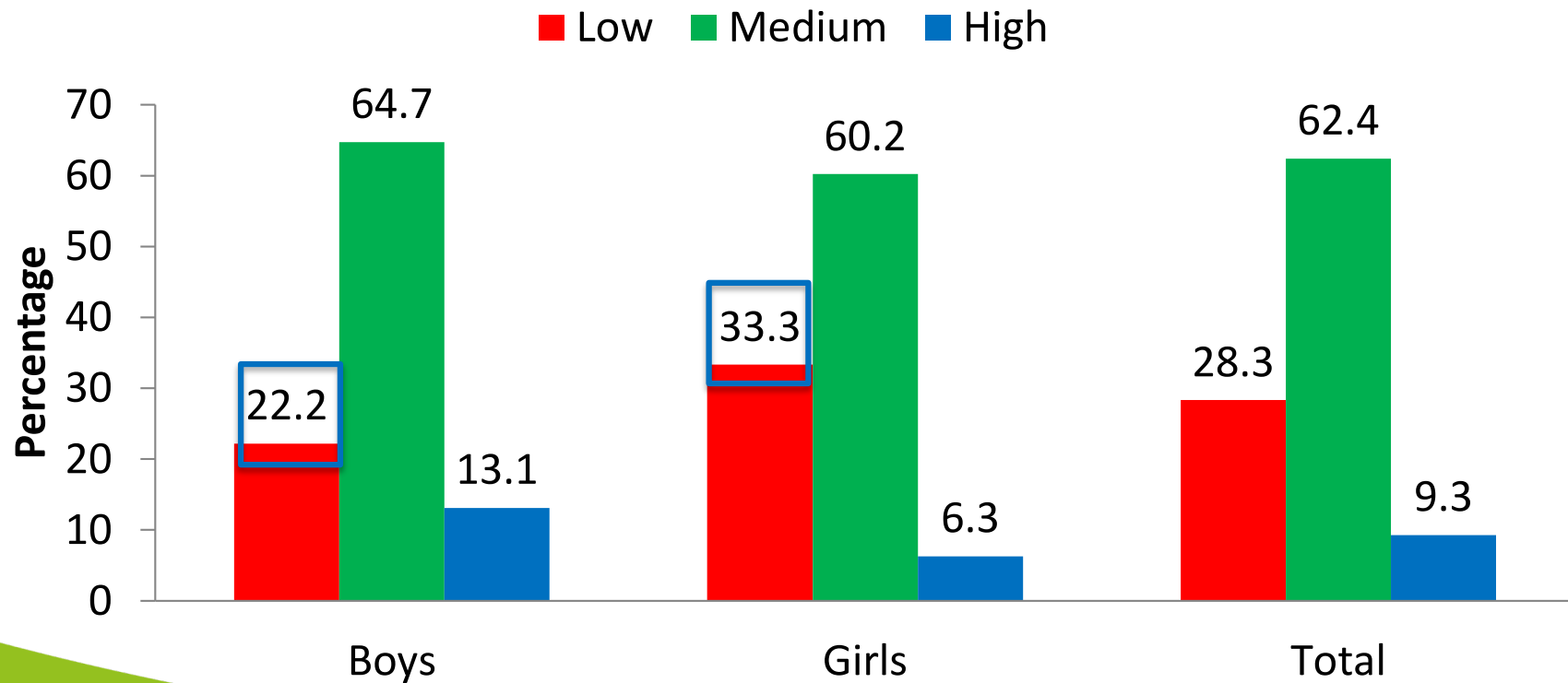
($\chi^2=314.55, p<0.001$)

Findings #3

More primary school girls had lower physical activity level (33.3%) than boys (22.2%)

Distribution of physical activity level among primary school children

(Boys, n=2513; Girls, n=3034; Total, n=5556)



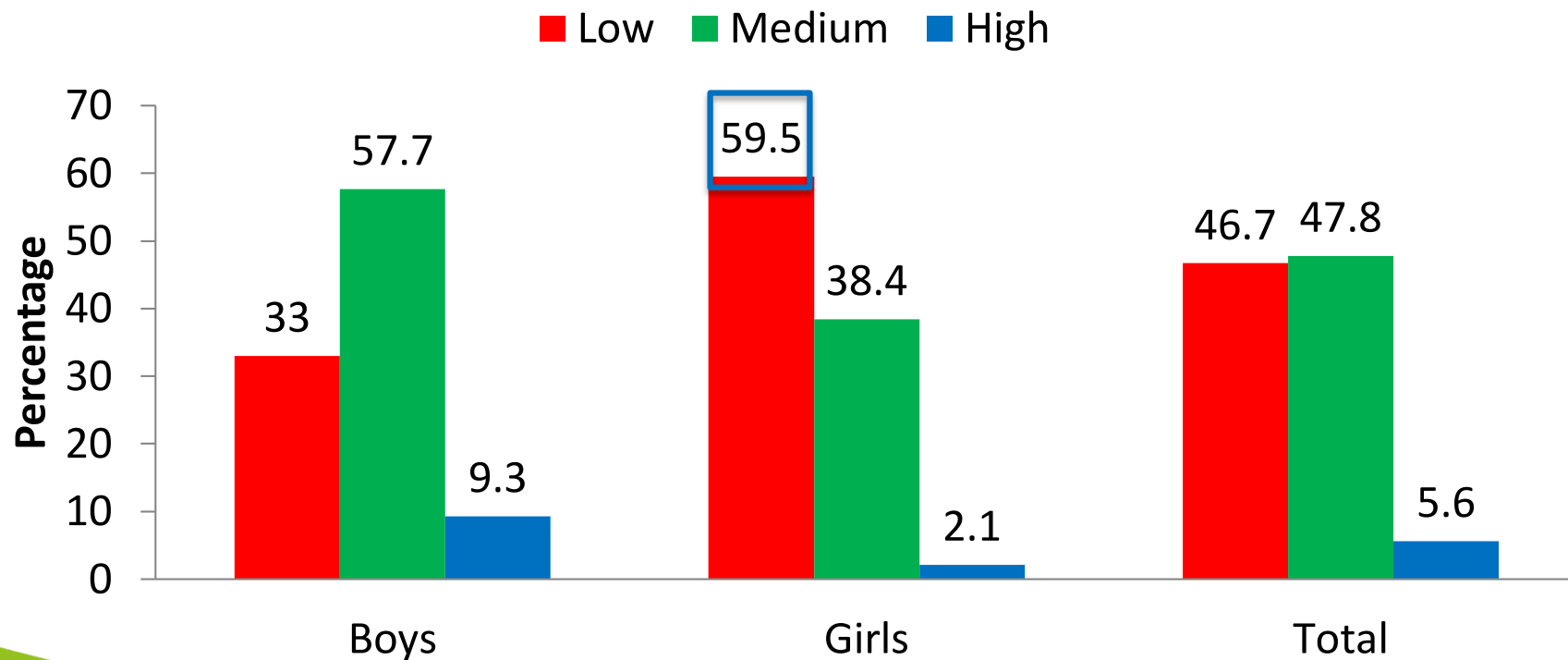
($\chi^2=131.01, p<0.001$)

Findings #4

The prevalence of low physical activity level among secondary school girls was almost double that of boys

Distribution of physical activity level among secondary school children

(Boys, n=1488; Girls, n=1587; Total, n=3075)

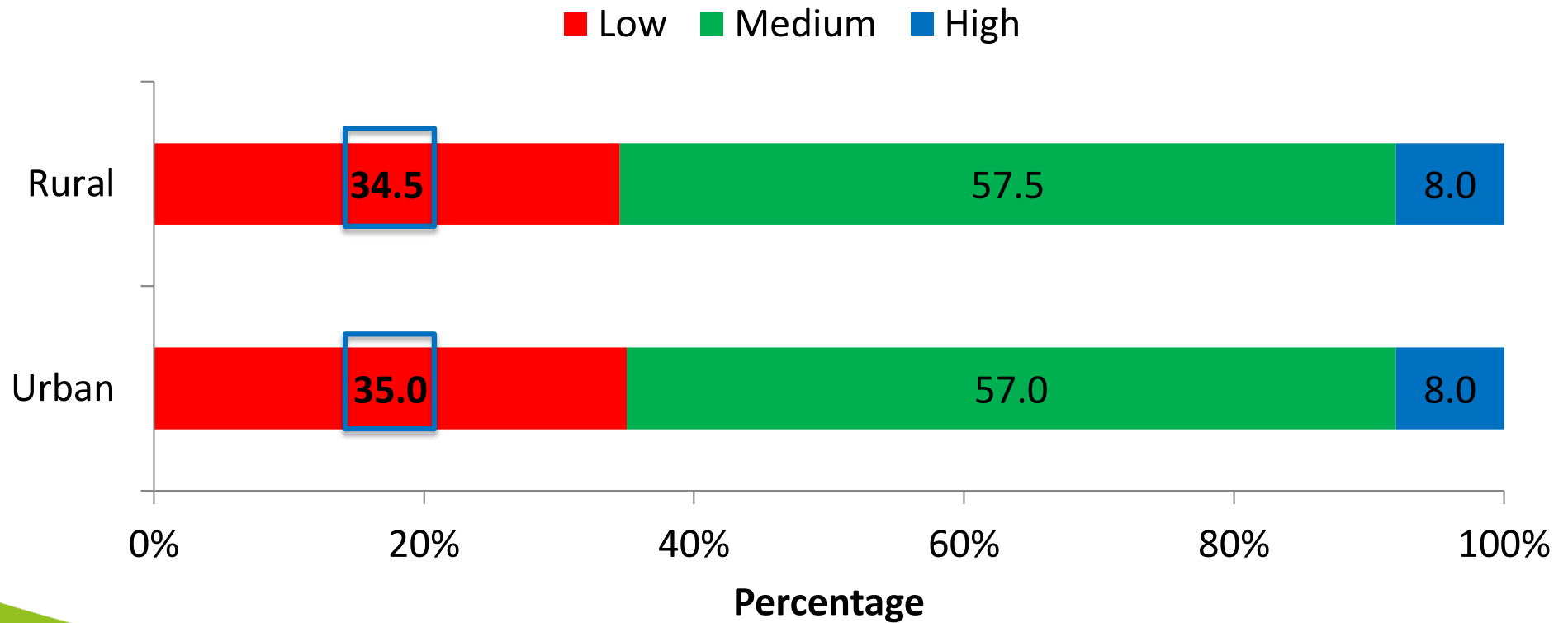


($\chi^2=246.75, p<0.001$)

Findings #5

The prevalence of low physical activity level was about the same among children in the urban and rural area

Overall Distribution of Physical Activity Level by Area
(Rural, n=5915; Urban, n=2716)



($p > 0.05$)

Findings #6

Secondary school children had higher mean screen time than primary school children

Screen time	Weekdays	Weekends
	Mean±SD (Hours)	
Primary school (n=5551)	2.28±1.73	4.20±2.78
Secondary school (n=3077)	2.98±2.20	5.38±3.71
Total (n=8628)	2.53±1.94	4.62±3.20

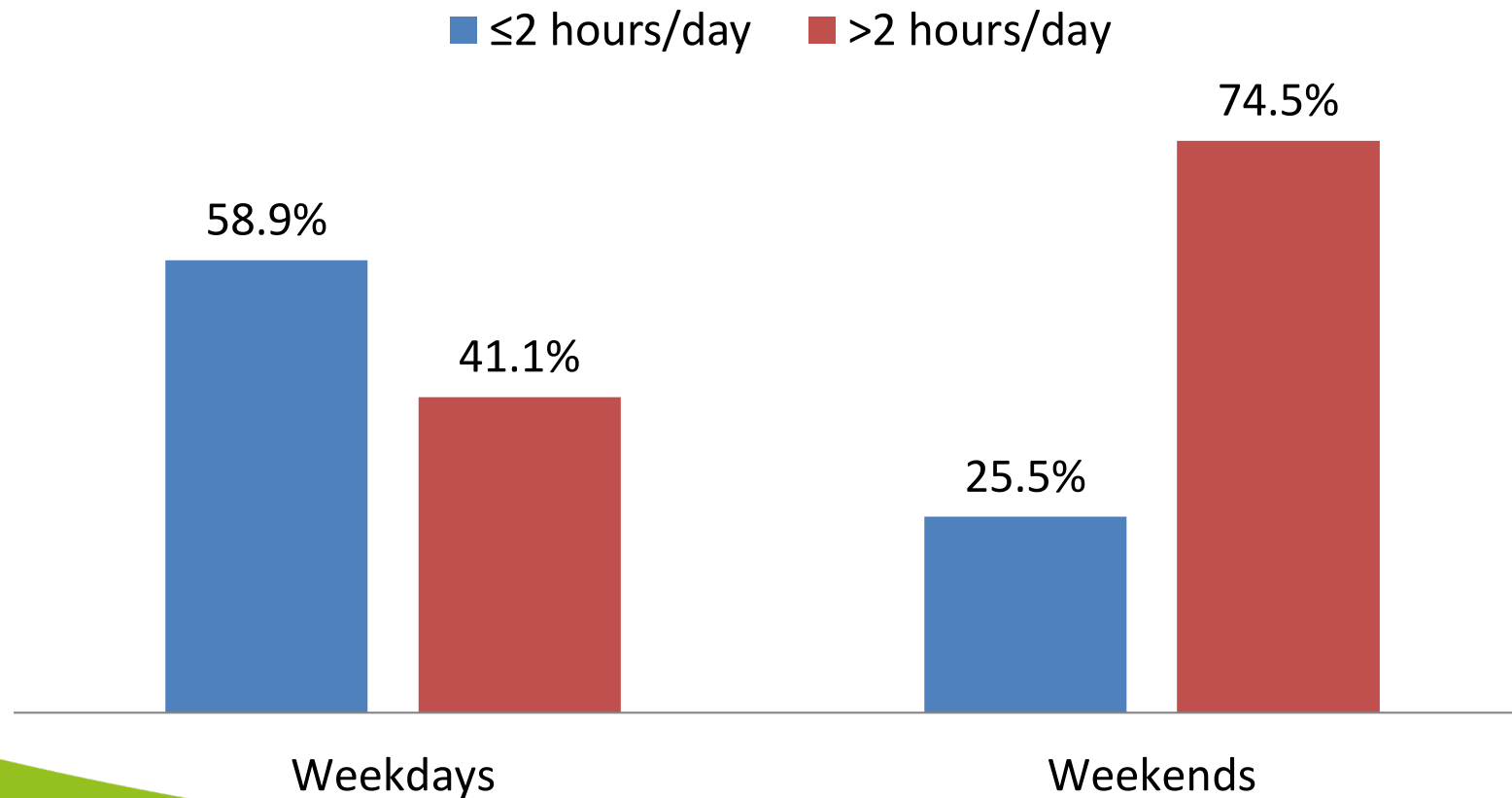
(t=-16.22, p<0.001) (t=-16.69, p<0.001)

Mean screen time was similar between sexes, area and ethnic groups (p>0.05)

Findings #7

More than 50% of all children had screen time of more than 2 hours per day in the weekdays and weekends

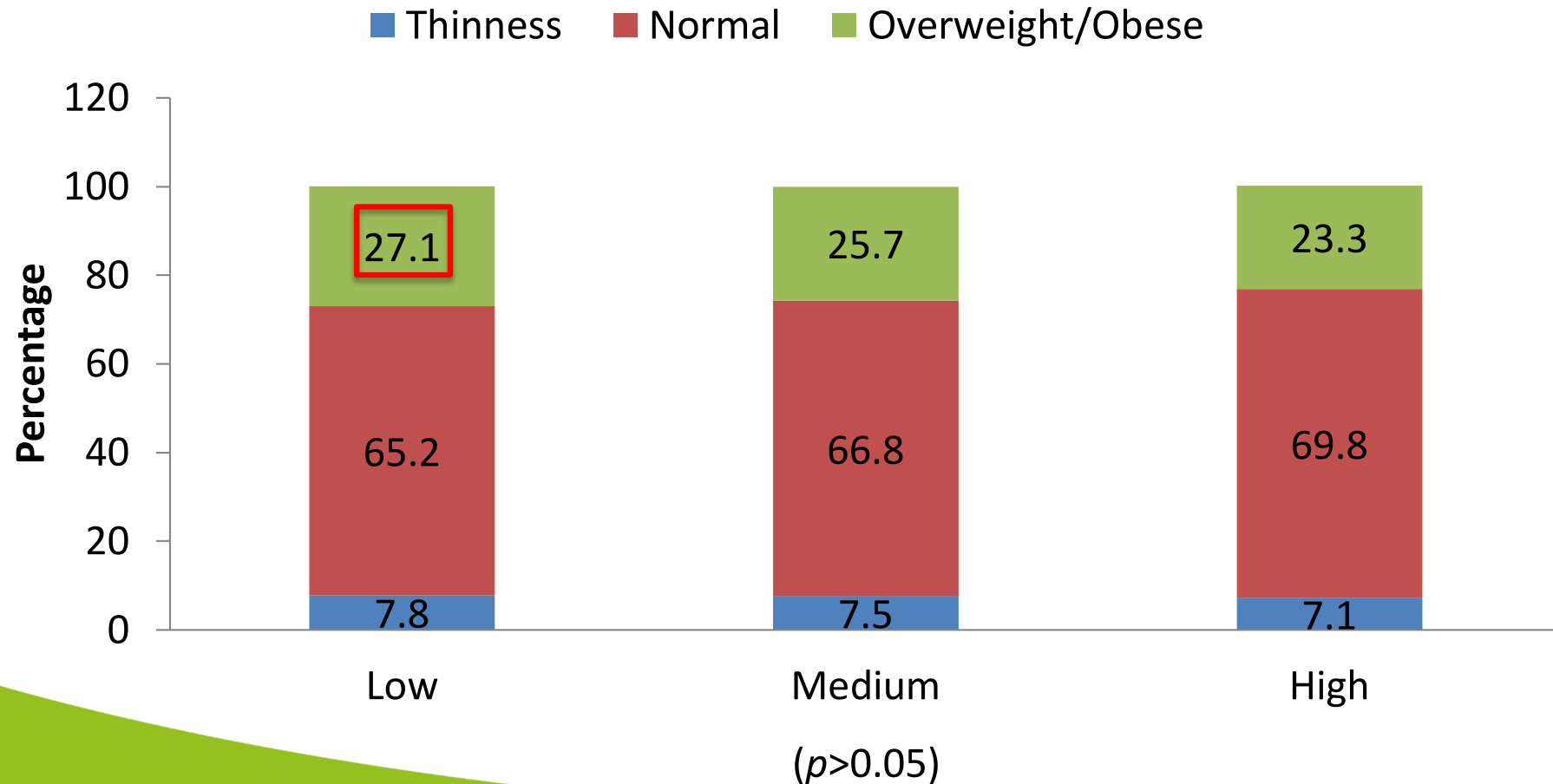
Distribution of screen time in the weekdays and weekends (n=8628)



Findings #8

There appears to be greater prevalence of overweight and obesity (27.1%) among children with lower physical activity level

Physical Activity Level and Bodyweight Status

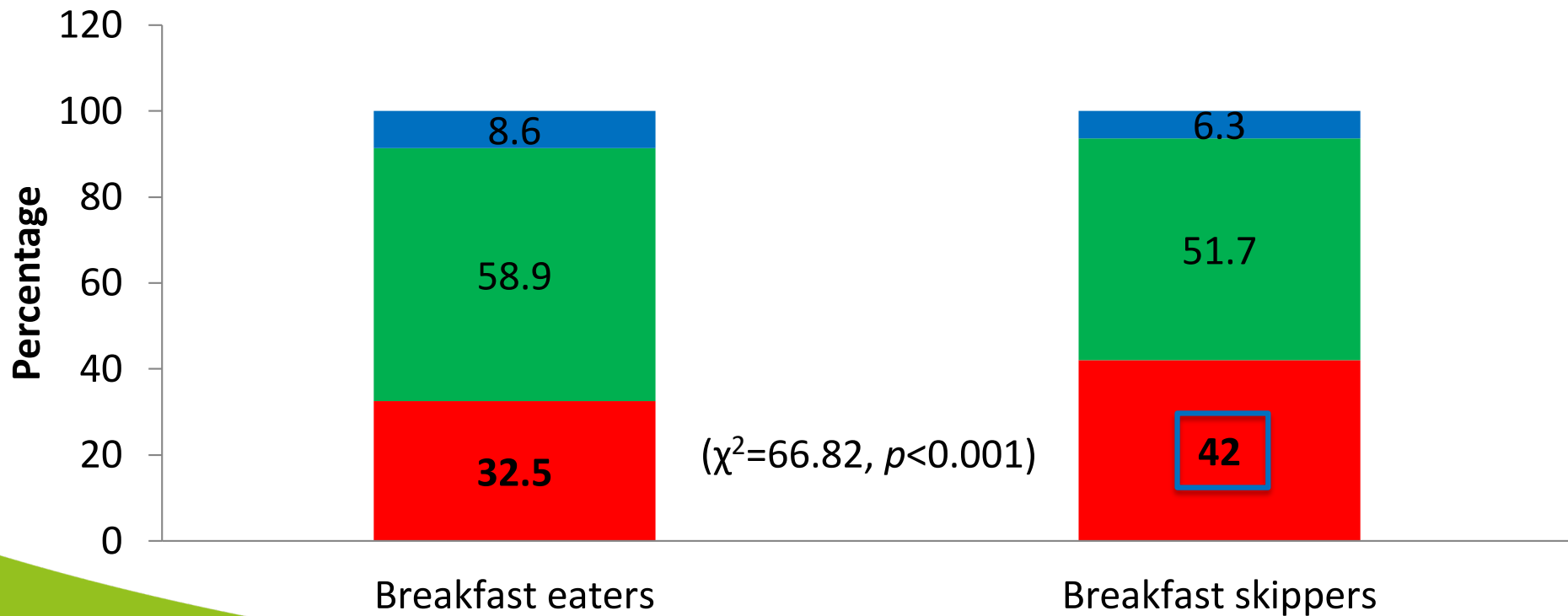


Findings #9

Low physical activity level was higher among breakfast skippers (42%) than breakfast eaters (32.5%)

Physical Activity Level between Breakfast Eaters and Skippers

■ Low ■ Medium ■ High



Recommendations

- Participation in Physical education should be compulsory for every child in school and ideally should be taught by a trained teacher
- Classes intended for physical activity education should be strictly utilised for this purpose
- Participation in physical education modules could be improved by offering a greater variety of activities and providing appropriate facilities
- Efforts to reduce sedentary lifestyle of children and increase physical activity level should be carried out to reduce the serious problem of overweight/obesity in the country.

References

- Dan, S.P., Mohd Nasir, M.T., Zalilah, M.S. (2007). Sex and ethnic differentials in physical activity levels of adolescents in Kuantan. *Malaysian Journal of Nutrition*, 13(2), 109-120.
- Farah Wahida, Z., Mohd Nasir, M.T., Haziz, A.S. (2011). Physical activity, eating behavior and body image perception among young adolescents in Kuantan, Pahang, Malaysia. *Mal J Nutr*, 17(3), 325-336. ntan. *Malaysian Journal of Nutrition*, 13(2), 109-120.
- Zalilah, M.S., Khor, G.L., Mirnalini, K., Norimah, A.K., Ang, M. (2006). Dietary intake, physical activity and energy expenditure of Malaysian adolescents, *Singapore Medical Journal*, 47(6), 491-498.



Thank You

