The correct way to weigh
Changing Student Healthy Eating & Physical Activity Behaviours

Rick Baldock
Project Coordinator

eat well be active - Primary School Project
How did we get here?
A summary of existing Australian data

% of 5 - 15 yr old children who were overweight

J Dollman & K Norton, University of SA
Early Childhood Children

- South Australian data collected by Child and Youth Health shows that there was an increase in the proportion of overweight and obese four-year-old children from 1995 to 2002, from 12.9% to 21.5% for females; and from 10.6% to 18.4% for males\(^1\).

- However for many children, school–based physical activity programs offer the only opportunity for developmentally appropriate, regular physical activity\(^2\).
Percentage of four year old boys who are overweight or obese, Adelaide, 2001

Source: CNAHS: A Social Health Atlas, 2005
Percentage of four year old boys who are overweight or obese, country SA, 2001

Overweight

Obese

Source: CNAHS: A Social Health Atlas, 2005
Estimated prevalence of overweight (not obese) people, by SLA, 2001

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
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<tbody>
<tr>
<td><strong>Standardised ratio (as an index)</strong></td>
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<tr>
<td>106 &amp; above</td>
<td>104 &amp; above</td>
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<td>103 to 105</td>
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<td>97 to 102</td>
<td>99 to 101</td>
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<td>94 to 96</td>
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<td>below 94</td>
<td>below 97</td>
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<td>data not mapped</td>
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Source: CNAHS: A Social Health Atlas, 2005
Estimated prevalence of obese people, by SLA, 2001

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<tr>
<td>116 &amp; above</td>
<td>116</td>
<td>116</td>
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<tr>
<td>108 to 115</td>
<td>95</td>
<td>95</td>
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<td>92 to 107</td>
<td>82</td>
<td>82</td>
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<tr>
<td>84 to 91</td>
<td>74</td>
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<tr>
<td>below 84</td>
<td>68</td>
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Source: CNAHS: A Social Health Atlas, 2005
Keeping it fun
Obesity Trends Among U.S. Adults between 1985 and 2008

Definitions:

**Obesity**: Body Mass Index (BMI) of 30 or higher.

**Body Mass Index (BMI)**: A measure of an adult’s weight in relation to his or her height, specifically the adult’s weight in kilograms divided by the square of his or her height in meters.
Obesity Trends* Among U.S. Adults
BRFSS, 1985

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 1986

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 1987
(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 1988
(*BMI $\geq$30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 1989
(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults

BRFSS, 1990

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)

No Data           <10%          10%–14%
Obesity Trends* Among U.S. Adults
BRFSS, 1991

(*BMI ≥30, or ~30 lbs. overweight for 5’4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 1992

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 1993
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Obesity Trends* Among U.S. Adults
BRFSS, 1994

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 1995
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Obesity Trends* Among U.S. Adults
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Obesity Trends* Among U.S. Adults
BRFSS, 2002
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- No Data
- <10%
- 10%–14%
- 15%–19%
- 20%–24%
- ≥25%
Obesity Trends* Among U.S. Adults
BRFSS, 2003

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Obesity Trends* Among U.S. Adults
BRFSS, 2007
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Obesity Trends* Among U.S. Adults
BRFSS, 2008

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Obesity Trends* Among U.S. Adults
BRFSS, 2009

(*BMI ≥30, or ~ 30 lbs. overweight for 5’ 4” person)
Many Americans like to be active
Prevalence of obesity in South Australia

Health Omnibus Survey 1993 - 2008
Prevalence of obesity (18+ years):

- 0.0 – 9.9%
- 10.0 – 14.9%
- 15.0 – 19.9%
- 20.0 – 24.9%
- 25.0 – 29.9%
- 30.0+ %
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Prevalence of obesity in South Australia

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- 0.0 – 9.9%
- 10.0 – 14.9%
- 15.0 – 19.9%
- 20.0 – 24.9%
- 25.0 – 29.9%
- 30.0+ %

Population Research & Outcome Studies Unit
Health System Information & Performance

Government of South Australia
SA Health
Why Change?

• To improve student learning and achievement
Change is supported through:
• Active Principal leadership for both the process and the outcome
• Teacher professional learning
• Teacher inquiry using logical problem-solving processes, intuition, passion and emotion.
• By facilitating teacher critical reflection.
What needs to change?

• The school
  • The children and students
  • The staff
  • The parents
  • The environment

• The community

• The community leaders - politicians

• The education bureaucracy
What does it look like?

Practitioner inquiry is a spiralling, iterative process of looking, thinking and acting. It is designed by educators to seek practical solutions to issues and problems in their professional work.

(Stringer, 1996)
Children making decisions
Literature

- Sociology of childhood
  - Children’s participation in decision-making
  - Children’s citizenship & rights
  - Consultation, voice & listening
- Research translation & influence
  - ideologies, beliefs, interests,
  - producers of information (researchers, pollsters etc) & suppliers of information (e.g. media) formal & informal decision-making structures
Why hear children’s voices

To make children's interests *visible* in the social and political process of directing and *gathering resources for children.*

Bradshaw and Sauli's work shows that "indicators of *poverty, well-being* and the *intra-familial distribution of resources" benefit from getting as close as possible to "the subjective experiences and everyday lives of children (as well as other actors)."
Positioning childhood

Prout argues that public dialogue about children has been, "caught between two poles:

- children as *in danger* and
- children *as dangerous."

He suggests that new ways be looked at that "focus on the possibility of *children's citizenship.*"
Social Policy & Children

Social policy has tended to see children through notions of dependence, vulnerability, malleability and investment in the future.

Children as ‘Beings’ rather than ‘Becomings’
5 areas of childhood change

• Children are a **declining** proportion of the **population** in industrialised countries
• Children's **living circumstances** are becoming **more diverse**
• Childhood is increasingly produced through **cross-national flows** of people, things, values and images that constitutes children as active agents in a complex process of multiple socialization
• Increasing efforts on the part of **government** to **control and regulate** childhood and
• As part of wider trends towards **individualisation**, the **emergence of children's rights and voice**

*Prout & Hallett, Hearing the voices of children: Social Policy for a new century*
Children seeking help

A majority of young people surveyed anticipated that a problem could be made worse when taken to an adult, underlining the importance of trust, confidentiality and respect for the young people's experiences and views.

Hallett, Murray & Punch
Successful participation in the shaping of Public Services

Birchall and Simmons (2002) note that successful participation depends on, bringing together a number of factors:

• including the presence of individuals who are motivated to participate
• clear (collective and individual) benefits to be gained from participation and
• the resources required to support and sustain it
Connecting Inquiry & Policy

- Treating both inquiry and policy making as a process that is more than a product
- ‘Scientific findings do not fall on blank minds that get made up as a result. Science engages with busy minds that have strong views about how things are and ought to be.’ Marmot, M.G. 2007
- ‘It is perfectly reasonable for governments to balance a number of interests in forming policies. ... Other .. (considerations besides research) include analysis of costs and benefits, risk analysis, and appreciation of the degree to which policies fit with public values.’ Marmot, 2007 from 21st Report on Environmental Pollution
Influences on policy decision making

[Diagram showing the interplay between social, institutional, and problem/issue elements in the decision-making process.]

Lomas, J, www.isuma.net/v01n01/index_e.shtml
Principles of Operation

- **Use whole child approaches** that recognise the complexity of children’s lives through all aspects of their (physical, social, emotional, spiritual and intellectual) development.

- **Work in partnership** with children to develop policy and programs for children.

- **Harness the support of parents, carers/teachers and communities** for children through Projects.

- **Develop a culture of involving children** in decisions which affect their lives.

- **Use evidence informed approaches** to support the operation and outcomes of the Project.

- **Develop a culture which respects and foregrounds the rights and responsibilities of the child.** The Project will be guided by the United Nations Convention on the Rights of the Child.

adapted from ‘Our Children and Young People - Our Pledge, A ten year strategy for children and young people in Northern Ireland 2006-2016’
Action Competencies

• Bjarne Jensen has developed an approach to developing student's action competencies
  • Investigate
  • Vision
  • Action
  • Change
Investigation of a Theme

• Why is this important to us?
• What is its significance to us/others–now/in the future?
• What influence do life style and living conditions have?
• What influences are we exposed to and why?
• How were things before and why have they changed?
Development of Visions

- What alternatives are imaginable?
- How are the conditions in other schools, countries, and cultures?
- What alternatives do we prefer and why?
**Action and Change**

- What changes will bring us closer to the visions?
- Changes within ourselves?
- In the classroom? In society?
- What action possibilities exist for realizing these changes?
- What barriers might prevent the undertaking of these actions?
- What barriers might prevent actions from resulting in change?
- What actions will we initiate?
- How will we evaluate those actions?
Data Collection

• The Project is supporting the collection of data by schools to enable evidence informed approaches to decision-making
• This supports school Project Team planning and decision making.
Examples of Students work

- Playtime Leaders during break times
- Canteen organisers and developers of Manager's J&P specifications
- Canteen Menu designers
- Data collectors and analysers
- Healthy eating and physical activity advocates with parents, other students and teachers
- Peer leaders in lessons in physical activity and healthy eating
- Special events e.g. Nude Food Days
A different environment
Reflection (5 minutes)

• What issue(s) arise for you from what you have heard during this session?
• Discuss this with your group.
• What decisions do your group need to make?
• Record
  • The issues
  • The discussion
  • Your group’s thoughts and decisions
Children Today
Is school-based physical education related to academic performance?

- Studies suggest that physical education either leads to a positive result or is associated with no change in academic performance.
- Increased time spent in physical education is unlikely to detract from academic performance even when less time is devoted to subjects other than physical education.
Physical activity breaks during class and academic performance

• Studies have found that offering physical activity breaks during standard classroom instruction have favorable associations with:
  • cognitive functioning such as attention/concentration
  • academic behaviors such as classroom conduct and/or
  • academic achievement such as test scores
Physical activity breaks during class and academic performance

• Classroom physical activity breaks do not appear to have a negative relationship with academic performance.
• Classroom teachers can include physical activity breaks as one strategy to promote academic-related benefits for students.
Physical Activity, Physical Education & Academic Performance

...... the available evidence shows that children who are physically active and fit tend to perform better in the classroom, and that daily physical education does not adversely affect academic performance. Schools can provide outstanding learning environments while improving children’s health through physical education.

*S. Trost, Active Living Research, Fall 2007, Robert Wood Johnson Foundation*
Sacrificing physical education for classroom time does not improve academic performance.

Students whose time in PE or school-based physical activity was increased maintained or improved their grades and scores on standardized achievement tests, even though they received less classroom instructional time than students in control groups.
Academic Performance

- Kids who are more physically active tend to perform better academically.
- Kids who are physically active and fit are likely to have stronger academic performance.
- Activity breaks can improve cognitive performance and classroom behavior.
- Elementary students’ on-task classroom behavior improves with physical activity breaks.
Activity Breaks

• Short activity breaks during the school day can improve students’ concentration skills and classroom behavior.

• Five studies consistently show that more time in physical education and other school-based physical activity programs does not adversely affect academic performance.

• There are several possible mechanisms by which physical education and regular physical activity could improve academic achievement, including enhanced concentration skills and classroom behavior.
Implications for policy and practice

• Schools should continue to offer or increase opportunities for physical activity.
• There is evidence that physical activity may help improve academic performance (including grades and standardized test scores) in some situations.
• Increasing or maintaining time dedicated to physical education does not adversely impact academic performance.
Implications for policy and practice

• Physical activity can impact cognitive skills and attitudes, important components of improved academic performance. This includes:
  • enhanced concentration
  • improved attention
  • improved classroom behavior
How exercise affects the brain

...exercise improves learning on three levels:

1. It optimises your mind-set to improve alertness, attention, and motivation;

2. It prepares and encourages nerve cells to bind to one another, which is the cellular basis for logging in new information; and

3. It spurs the development of new nerve cells from stem cells in the hippocampus

Spark! How exercise will improve the performance of your brain, Dr John Ratey & Eric Hagerman, 2009
Reflection

• Think about the research findings you've just reviewed.
• Discuss the findings and the possible implications for your school.
• How would this information inform your school action plan?
ACHPER (SA)

ACHPER (SA) can offer this session to your School/Site.
Contact ACHPER (SA) for more information info@achpersa.com.au
Or visit our website www.achpersa.com.au
Or telephone 08 8363 5700