

The PEACH RCT: a family-focussed weight management program for 5-9y olds



Parenting, Eating & Activity

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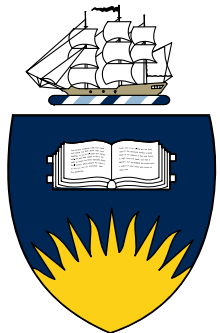
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The University of Sydney



Queensland University of Technology
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Background - 1

- 20% of Australian boys and 21% girls overweight/ obese
 - Rates overweight x 2, obesity x 3 over 1 decade (Magarey, Daniels et al, 2001)
- Cornerstones of management:
 - dietary change,
 - ↑ physical activity
 - ↓ sedentary behaviours
 - behaviour modification
- Enhancing parent effectiveness potentially important in primary and secondary prevention (Golan, 1998)

Background - 2

- PEACH RCT evaluated effectiveness of family-focussed weight management program for 5-9 yr olds with and without parenting skills training
- 2 treatment arms, 6mth intervention
 - Healthy Lifestyle only (HL)
 - Five fortnightly 1.5 hr sessions
 - Three monthly 1.5hr sessions
 - Four 15 minute individual support phone calls
 - Healthy Lifestyle + Parenting Skills (HL+P)
 - + 4 weekly 2 hour parenting sessions prior to above
- Parents as agents of change

Background - 3

Outcomes

- BMI and waist circumference z scores
- Metabolic parameters (TC, HDL/LDL, TG, insulin, glucose, BP)
- Health related quality of life (PedsQL) and child perceived body image
- Food intake (Child Dietary Questionnaire)
- Activity and sedentary behaviours
- Parenting: Being a Parent, Alabama Parenting Q
- Health Belief Questionnaire
- Barriers and enhancers external to the program

This presentation

- evaluate change from baseline in
 - body mass index (BMI) z score
 - waist circumference (WC) z-scorein children enrolled in the PEACH RCT
 - at completion of the 6-month intervention and
 - at 6 and 12 months later (12 and 18 months from baseline)without further program contact

Methods

- Volunteers recruited mainly through media and school newsletters in Adelaide and Sydney
- 80% of eligible subjects consented
 - overweight but BMI z score ≤ 4.00
 - parent able to attend group sessions (Facility with written and spoken English)
 - no disorder affecting diet or activity, or medications affecting weight
- Retention 80% 6 mth; 72% 12 mth; 60% 18 mth
- z-scores - LMS method using British data (Cole et al 1995)
- Analysis: univariate anova

Methods

Analysis (SPSS version 14)

- univariate anova at 6, 12 and 18 months
 - fixed effects: site, sex, group
 - covariates: **baseline age** and dependent variable (BMI/waist z) at baseline
- model
 - Main effects: each factor and covariate
 - **Interactions**: site*group; site*sex; group*sex
- theoretical assumptions of anova checked

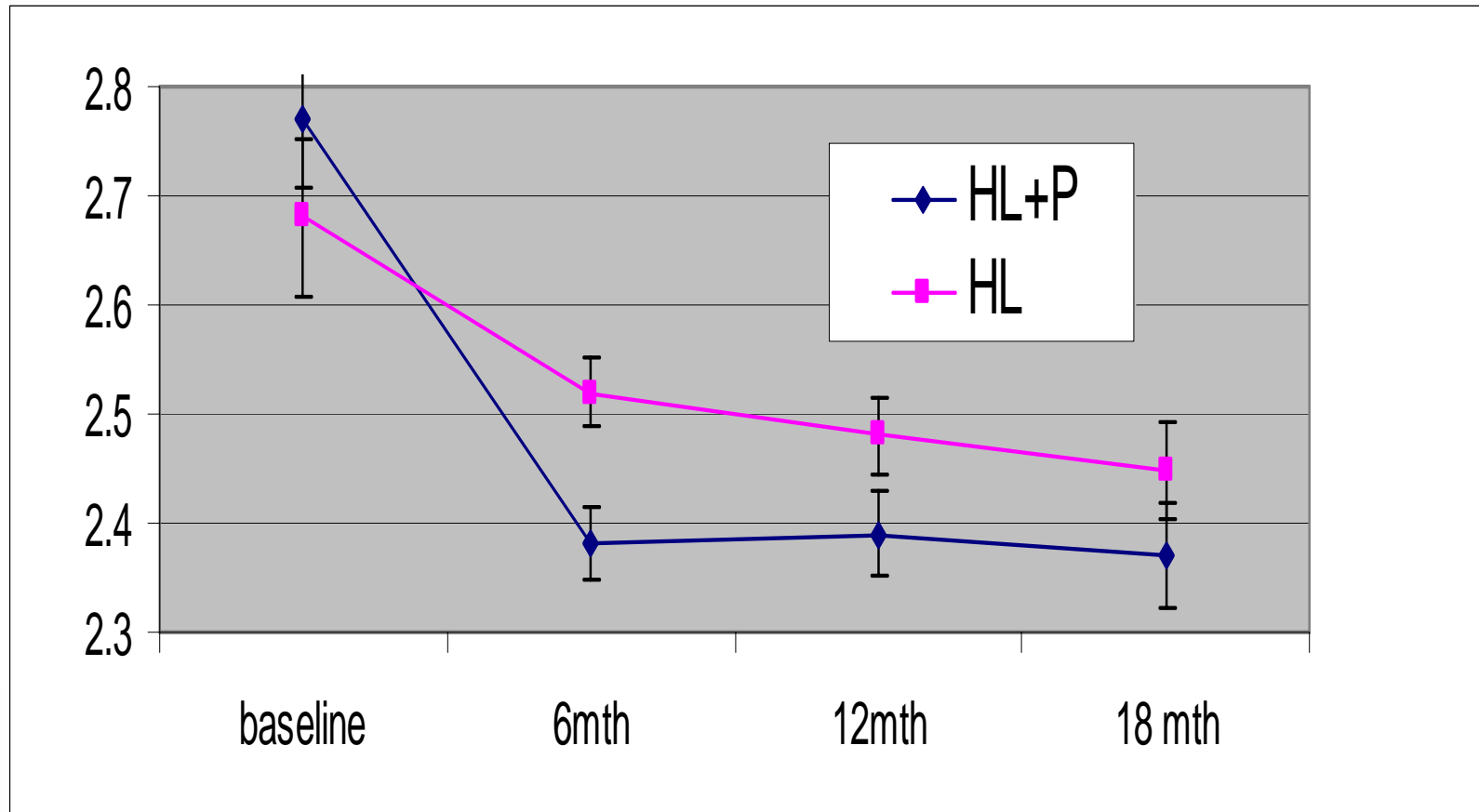
Results: Number/group at time points

		0 mth	6 mth	12 mth	18 mth
Sample size	HL	84 [48f]	70 [42f]	64 [37f]	54 [30f]
	HL+P	85 [46f]	66 [39f]	59 [34f]	48 [29]
Retention rate	HL		83%	76%	64%
	HL+P		78%	69%	56%



Results: BMI z-score

Change in BMI z score over time by group



Results: BMI z-score

Intervention Effect (at 6mth)

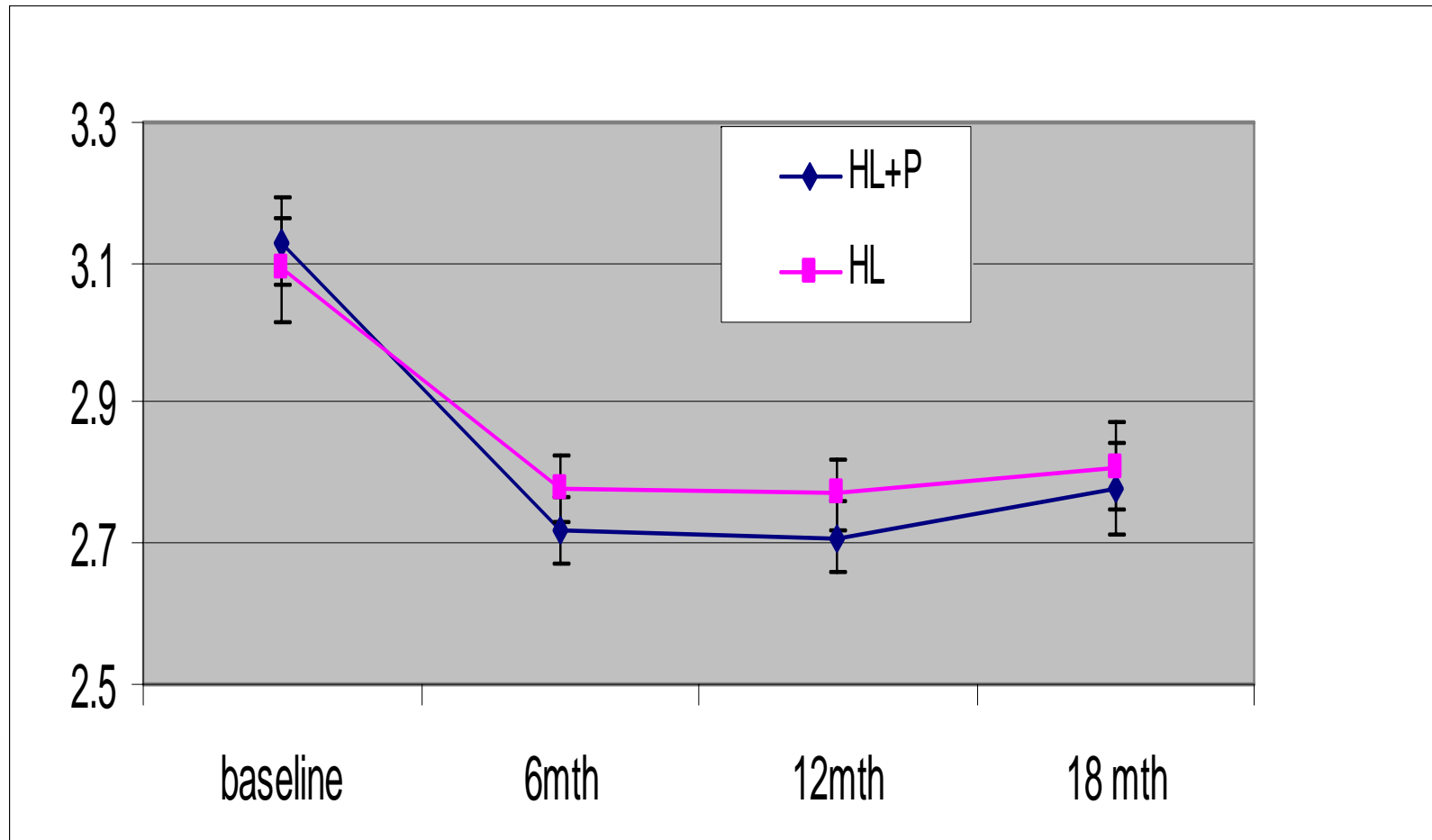
- ↓ BMIz 0-6mth significant ($p < 0.001$) for both groups
- AND
- Significant difference between groups ($p = 0.005$)
 - HL = 2.52 ± 0.032 (reduced from 2.68 ± 0.071)
 - HL+P = 2.38 ± 0.033 (reduced from 2.77 ± 0.063)
 - Also significant differences between gender and site (males and Sydney subjects responded better regardless of group allocation)

Long-term Maintenance (at 12 and 18mth)

- ↓ BMIz 0-12mth AND 0-18mth significant ($p < 0.001$) for both groups
- BUT
- Significant differences observed at 6mth disappeared

Results: waist z-score

Change in waist z score over time by group



Results: Waist circumference z-score

Intervention Effect (at 6mth)

- ↓ WCz 0-6mth significant ($p < 0.001$) for both groups

BUT

- No significant difference between groups ($p = 0.40$)
 - HL = 2.77 ± 0.048 (reduced from 3.09 ± 0.073)
 - HL+P = 2.72 ± 0.049 (reduced from 3.13 ± 0.064)
- As for BMIz, boys performed better than girls ($p = 0.004$)

Long-term Maintenance (at 12 and 18mth)

- ↓ WCz 0-12mth AND 0-18mth significant ($p < 0.001$) for both groups

BUT

- Still no significant differences observed between groups

Conclusion

- PEACH is an effective weight management intervention for 5 to 9-year-old children
 - significantly reduced BMI and waist z scores at end of intervention and relative weight loss maintained over the subsequent 12 months (to 18 months from baseline)
- wider outcomes to be assessed
- 2 year follow-up nearly complete
- 5 year follow-up funded by Financial Markets Foundation

Future directions

- Obesity is a chronic condition
- Requires chronic disease management approach
- Funding application
 - 6 month PEACH
 - 6 monthly monitoring
 - 4 group sessions parent/child separate/together per year for further 2 years

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References

Magarey, Daniels et al. MJA 2001;174:561-4

Golan. Am J Clin Nutr 1998;67:1130-35

Cole et al. Arch Dis Child 1995;73:25-29

