

Joint Public Health Annual Conference: Early Intervention for Life

Early intervention in adults

Dr Michelle McKinley

Centre for Public Health & NI UKCRC Centre of
Excellence for Public Health Research,

Queen's University Belfast

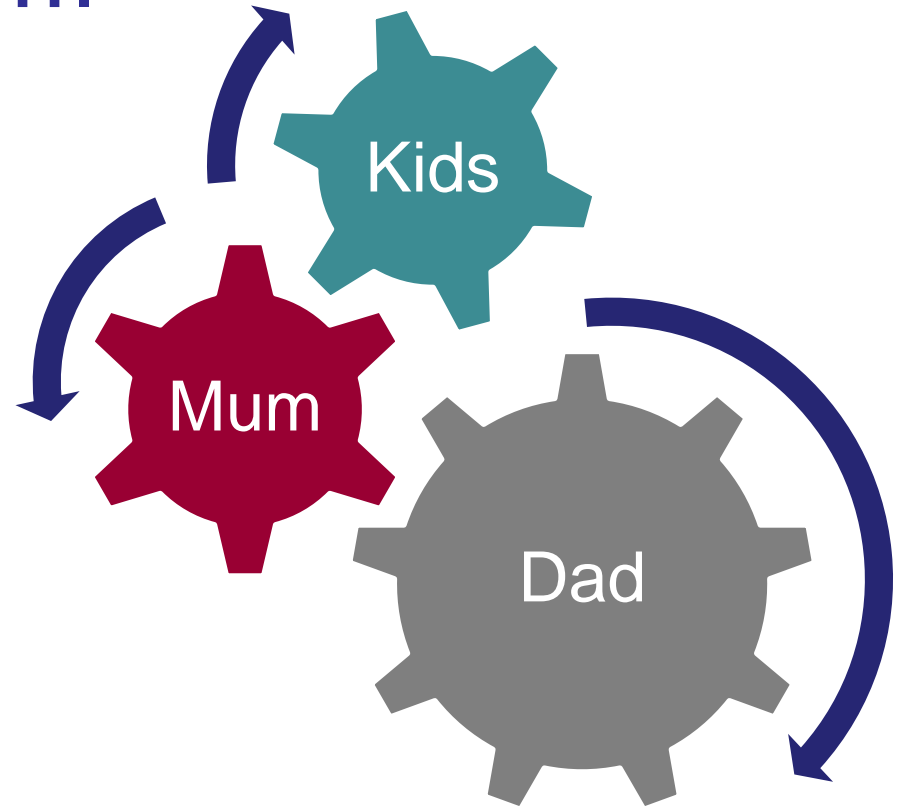
m.mckinley@qub.ac.uk



**QUEEN'S
UNIVERSITY
BELFAST**



Spill over effects....



Mums as agents of change.....



Mums as agents of change

...but mums often struggle to prioritise their own health



Challenge of weight management during the reproductive years

- Pregnancy can set women on an **upward weight trajectory** for the decades ahead.....

Established predictors of long term obesity for women:

- gaining too much weight during pregnancy (i.e. **excessive gestational weight gain, GWG**)
- **postpartum weight retention (PPWR)**.



Challenge of weight management during the reproductive years

- Pregnancy can set women on an **upward weight trajectory** for the decades ahead.....

Established predictors of long term obesity for women:

- gaining too much weight during pregnancy (i.e. **excessive gestational weight gain, GWG**)
- **postpartum weight retention (PPWR).**



Challenge of weight management during the reproductive years



Nutrition Research Reviews, page 1 of 14
© The Authors 2018

doi:10.1017/S0954422418000070

Weight loss after pregnancy: challenges and opportunities

Michelle C. McKinley^{1,2*}, Virginia Allen-Walker¹, Caroline McGirr¹, Ciara Rooney¹ and Jayne V. Woodside^{1,2}

¹*Institute for Global Food Security and Centre for Public Health, Faculty of Medicine, Health and Life Sciences, Queen's University Belfast, Institute of Clinical Science A, Grosvenor Road, Belfast BT12 6BJ, UK*

²*UK Clinical Research Collaboration (UKCRC) Centre of Excellence for Public Health Research NI, Belfast, UK*



Postpartum - Opportune time

The postpartum period =
inter-pregnancy period or 'pre-conception
period' for subsequent pregnancies

New motivations around health

Potential to influence mother's health
AND also the wider family's health



Supporting PP weight loss: some challenges



The challenges of postpartum weight loss

- Women struggle to balance the demands of postpartum life with weight management
 - Time issues
 - Motivation issues
 - Support (partner, family, health professionals, friends, other mums) – both +ve and -ve
 - Complicating factors – postnatal depression, sleep (or lack of it)



Montgomery et al; Matern Child Health J 2011; 15:1176-84

The challenges of postpartum weight loss

Montgomery et al; Matern Child Health J 2011; 15:1176-84

It's hard to juggle everything you need to do when you work, take care of the house, take care of everyone else's needs. As a mother, I think it is typical to say that a mother's needs always come last because you put everybody else before you. So that could be another factor in taking care of yourself physically, eating, and exercising. It's hard to find the time to, because everything else is so demanding.



Supporting MumS study

**An intervention for weight loss
and maintenance of weight
loss in the postpartum period**



NHS
*National Institute for
Health Research*

HSC Public Health
Agency

Mode of delivery - Text messages...

**Low – cost
(roll-out)**

**Allows
sustained
contact over
longer-term**



**Anyplace,
anytime**

**Used to change
health
behaviours
(e.g. txt2stop)**

**Proactive &
reactive**

**Simple mode of
communication**



Intervention message content

Core messages - diet & physical activity

- Information
- Addressing general barriers and those that are specific /most relevant to this group
- BCTs embedded in messages

Tailoring

- Breastfeeding
- Desire to stop smoking

Interactive

- Trigger words: Exhausted, Bad day, Crave, Tempted
- Yes/No replies
- Weekly weight text

Frequency

Weight Loss Messages (0-6 months)

wks 1 & 2 n=15/wk
wks 3-8 n=14/wk
wks 9-16 n=10/wk
wks 17-24 n=8 /wk

Weight loss maintenance messages (6 months – 1 year)

N=6/wk

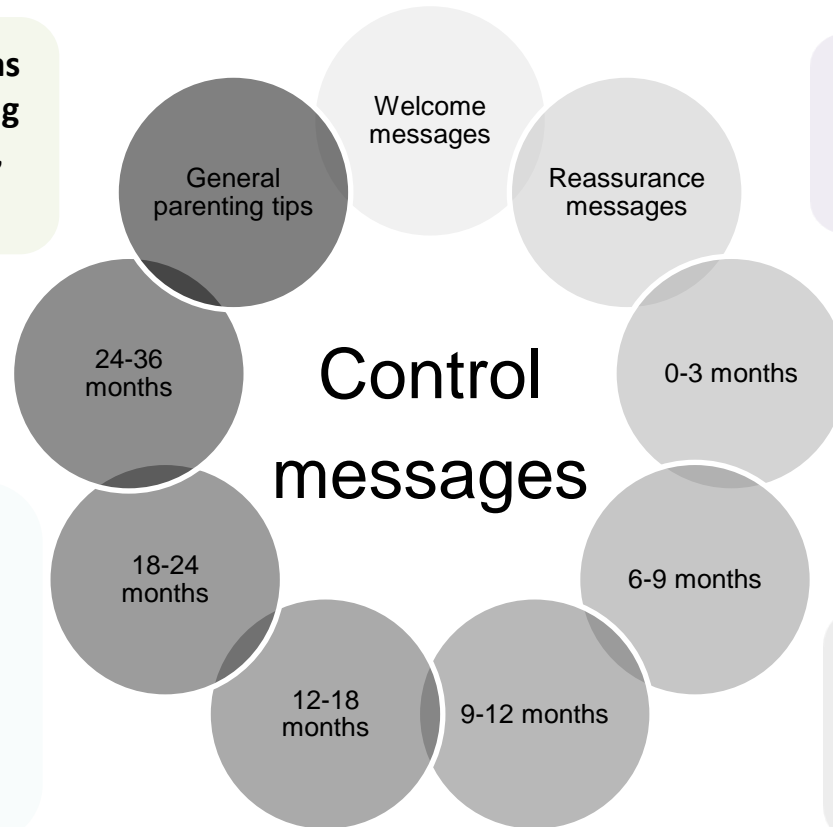
Control message content

Tips and advice re. issues such as potty training, tantrums, feeding times, messiness, consistency, bedtimes.

Development each month (e.g. sensory milestones, physical milestones, language skills, cognitive development, teething, weaning, sleeping, safety, playtime).

Reminded parents that developmental milestones are a guide only.

Frequency: 3 text messages/week for 1 year



Pilot RCT

Months 13-32

Exclusion criteria:

No mobile phone, insufficient English, eating disorders, psychiatric disorders, T1DM, pregnancy, special diets

Recruitment:

Spans wide time frame:

- Community groups
- Social media



50 postpartum women
0-2 years PP, ≥ 18 years,
BMI of >25 kg/m



50 postpartum women
0-2 years PP, ≥ 18 years,
BMI of >25 kg/m

Intervention group –
text messages with
advice on diet and
physical activity (BCTs)

Active control –
text messages on child
care & development

Data collection: 0, 3, 6, 9, 12 months
Anthropometric measurements (e.g. weight),
questionnaires (e.g. diet and physical activity), interviews
(to assess acceptability of the intervention at 3 & 12 mo)

12 month intervention



Stop/ go criteria: acceptability of the intervention and active control

Mean satisfaction with text messages across 12 months delivery



Very Satisfied

Mostly satisfied

Neither satisfied or dissatisfied

Mostly dissatisfied

Very dissatisfied

47%

42%

9%

2%

1%



Stop/ go criteria: positive indicative effects

- Intervention group indicated a trend towards mean weight reduction at each follow-up time point, compared with the control group
- Weight change within and between groups at 12 months

Weight at 12 months (kg)	Intervention n N= 36	Control N= 39	Adjusted difference in means* (95% CI)
<i>Mean (SD)</i>	-1.75 (6.7)	0.19 (7.5)	-1.67 (-4.88 to 1.55)

* Adjusted for baseline weight



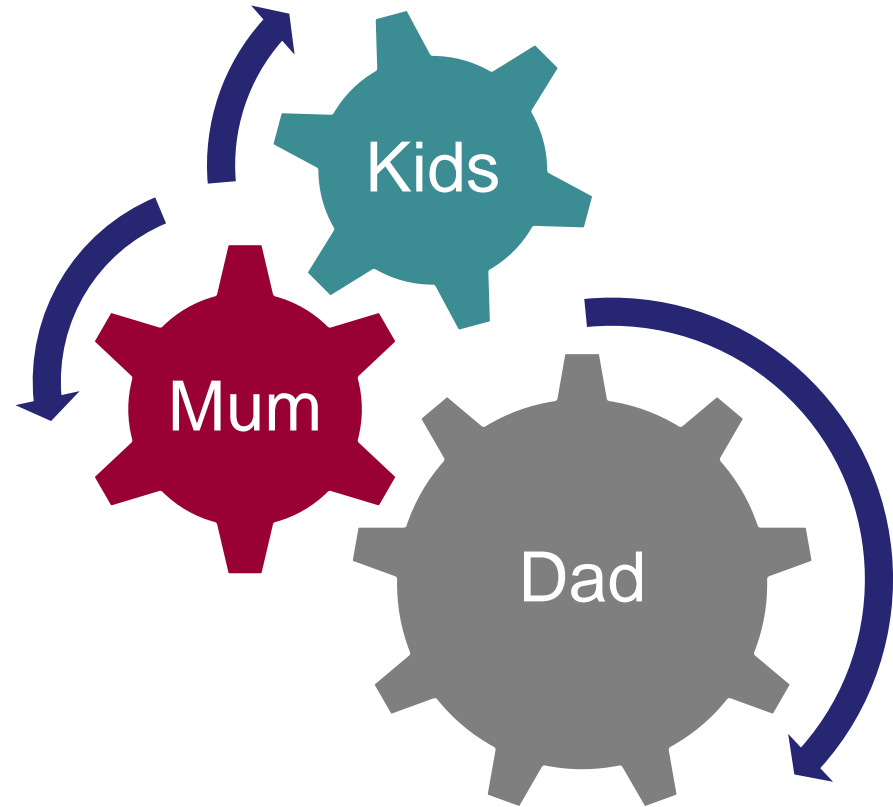
Stop/ go criteria: positive indicative effects

- Number (%) gaining or losing greater than or equal to 5 kg, or losing 5% of body weight, between baseline and 12 months


Weight change Months 0 to 12	Interventio n N= 36	Control N= 39
Gained \geq 5kg <i>N (%)</i>	3 (8.3)	8 (20.5)
Lost \geq 5kg <i>N (%)</i>	8 (22.2)	9 (23.1)
Lost 5% body weight <i>N (%)</i>	11 (30.6)	10 (25.6)



Spill over effects....



‘Ripple’ effect on infant zBMI trajectory of an internet-based weight loss program for low-income postpartum women

S. Phelan¹ , T. A. Hagobian¹, A. Ventura¹, A. Brannen¹, K. Erickson-Hatley², A. Schaffner³, K. Muñoz-Christian⁴, A. Mercado¹ and D. F. Tate²

¹Department of Kinesiology and Public Health, California Polytechnic State University, San Luis Obispo, CA, USA; ²Departments of Health Behavior and Nutrition, Gillings School of Global

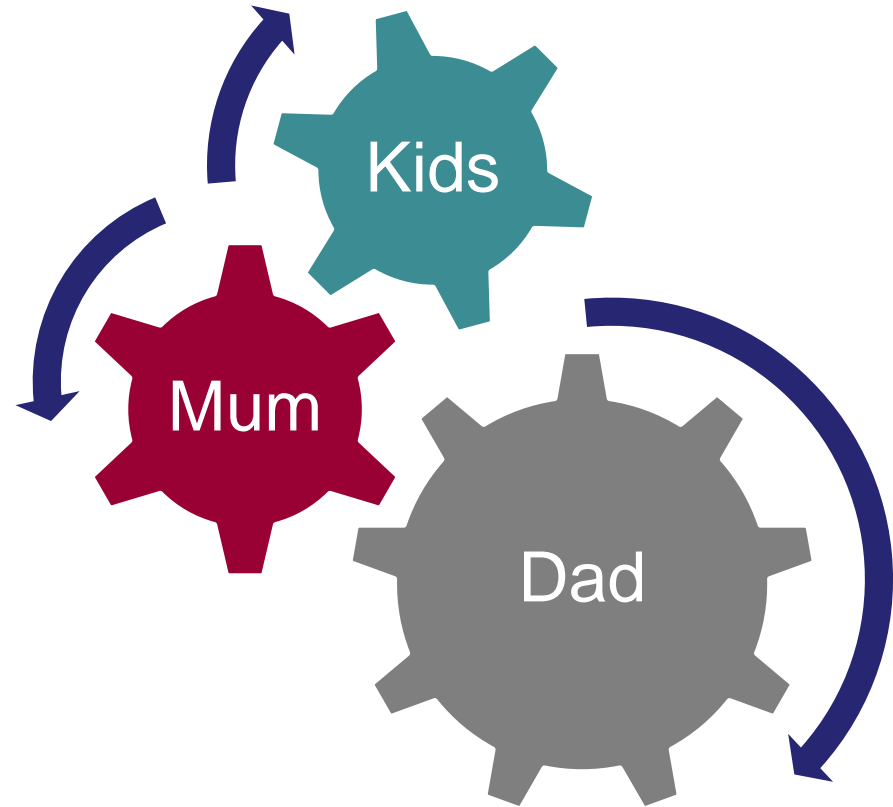
Summary

Background: Weight loss interventions can have positive ‘ripple’ effects on untreated partners in the home, but ripple effects on infants are unknown.

Conclusions: An internet-based weight loss program for low-income, postpartum mothers had a positive ‘ripple’ effect on the zBMI of infants in the home during the first 6 months of treatment.



Spill over effects.... what about dads?



The Influence of Fathers on Children’s Physical Activity and Dietary Behaviors: Insights, Recommendations and Future Directions

Philip J. Morgan^{1,2} · Myles D. Young^{1,2}

- Fathers notably absent from research exploring parental influences on child physical activity and nutrition
- To improve the quality of childhood obesity prevention programs, a deliberate and sustained effort is needed from researchers to greatly increase the meaningful engagement of fathers
- Relatively little is known about how best to engage fathers in obesity prevention



Conclusion

- Women are powerful agents of change – e.g. interventions before, during or after pregnancy may have beneficial effects on wider household
- Much less is known about the role of fathers
- For any work we do, we need to report what doesn't work as well as what does work (include a process evaluation)

