Weight management in the postpartum period - the Supporting MumS (SMS) study

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SMS Study

Short messages to support mums

HSC Public Health Agency
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NHS

National Institute for Health Research

- **NIHR Call:** 14/67 Weight management after pregnancy

- **Research Question(s)**

  – What are the effective and cost-effective interventions for weight management after pregnancy?

How to deliver the intervention?

- *Commissioning brief: …..Consideration should be given to intervention timing, duration**, delivery format, engagement** and sustainability.*

- Need for:

    – A flexible and individualised approach to weight loss at this life stage

    – Home-based or more adaptable anytime, anyplace approach

    – Key components – diet, physical activity, key behaviour change techniques

    – Pay attention to maintenance of weight loss

The approach – SMS – text message

- **Simple** mode of communication - uses basic mobile technology

- Intervention can be **proactive as well as reactive** - does not necessarily rely on initiation by the participant

- **Instant,** delivered in a timely manner - anyplace, anytime

- Allow **flexible content and scheduling** – tailoring

- **Sustained contact** women over medium-long term - extended contact following WL – considered best practice for WLM

- Ability to **re-engage** with women after life events that may disrupt weight management progress (illness, stress)

- **Low-cost** – potential for roll-out and scalability

- Has been used successfully to change various health behaviours

Supporting **M**um**S** (**SMS**) study

A tailored, **SMS-delivered**, **multi-component intervention** for **weight loss** and **maintenance** of weight loss in the **postpartum period**: intervention adaption and pilot RCT.
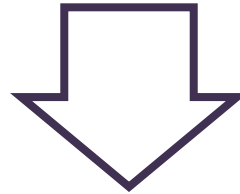
http://www.nets.nihr.ac.uk/projects/phr/146720

Two stages:

Intervention Adaptation
Months 0-12
Jan-Dec 2016

Pilot RCT
Months 13-32
Jan '17- Aug '18

Intervention Adaption
Months 0-12

- **Systematic review** of systematic reviews to identify behaviour change techniques linked to effectiveness in weight loss interventions

- **Literature review** – incl qualitative studies

- **Text message development** - based on the above plus review of online forums (for tone/language)

- **PPI** testing

- Add functionality to SMS platform

Week	Day	Text No.	Description of text content	Text message
Week 1 topics: Start thinking about diet, motivation for taking part in SMS, PA benefits, portion size, snacking, weight loss info, s...				
	Day 1	1	Welcome and Signup	Congratulations on the birth of your baby and welcome to the Supporting MumS (SMS) study! SMS will send you text messages with advice and tips on how to keep you fit and healthy. Find out more about the programme **here** you have any questions during the programme, contact us **here**.
		2	Motivational/encouraging message	One of the best ways to care for your baby is to also care for yourself. Eating well and being active will keep you fit and healthy. Remember it took 9 months for your baby to grow so don't expect to return to your pre-pregnancy weight too quick. We will help you make small changes so that you can achieve success in time.
	Day 2	3	Motivation for taking part in SMS	The fact that you joined the SMS programme shows you are motivated to make positive lifestyle changes. Think about (or even jot down!) what made you sign up - keep this in mind during the programme.
		4	Physical activity (PA) - benefits	Exercise for energy! Being active can help you get back to your pre-pregnancy weight and give you more energy - something all mums need lots of to keep up with kids!
	Day 3	5	PA - reflection on own patterns	What is your activity pattern like? What types of activity do you enjoy? Throughout the weeks we will send you som ideas on how you can get active - it's easier than you think! Start thinking about what you might enjoy doing.
		6	PA - practical suggestion	Walking is one of the simplest ways to ease into a fitness routine after giving birth. A walk will do wonders for you body - 10 minutes could burn around 40 calories! Try to see if you can go for a walk this week. You can gradually w up to a brisk pace when you feel ready.
Week 1	Day 4	7	Diet - reflection on own eating patterns (portion sizes,	Many mums tell us their food intake can be a bit irregular at this time in their life! Quite often they find themselves snacking a lot more than they used to and having larger portions. Does this sound familiar?
		8	Diet - portion size (information, reflection)	Prepare to portion! You don't need a fancy measuring cup at hand. You can use teacups. As a general rule we should have 1/2-1 cup of cooked rice/pasta/potato, 2-3 cups of salad or vegetables and a palm size amount of m (e.g. chicken). Think if your portion sizes match up to this.
		9	Diet - snacking (information, reflection)	Are you a snacker? Many mums snack on high fat and sugary foods (like crisps, buns and other treats) if they are tired, stressed or lonely. It's easy to pile on the calories without even realising! Think about why you snack and wh you usually snack on. During the programme we will help you make healthy snack choices.

The Centre of Excellence for **Public Health** *Northern Ireland*

Wk 1- 24 / Sheet2 / Sheet1

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

Intervention messages also supported by:

- **Website –** 'home' for all the useful links we send in the messages, e.g. NHS Choices
- **Discussion forum –** private discussion board for the intervention group
- **Buddy opt-in –** participants can request that a friend/family member also receives their text messages as a way of encouraging social support

Control message content

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

Messages about baby's development each month (e.g. sensory milestones, physical milestones, language skills, cognitive development, teething, weaning, sleeping, safety, playtime).

Sent regularly.
Aim to remind parents that developmental milestones are a guide only.

Frequency: 3 text messages/week for 1 year

Control messages

- General parenting tips
- Welcome messages
- Reassurance messages
- 0-3 months
- 6-9 months
- 9-12 months
- 12-18 months
- 18-24 months
- 24-36 months

Pilot RCT
Months 13-32

Exclusion criteria:
No mobile phone, insufficient English, eating disorders, psychiatric disorders, T1DM, pregnancy

Recruitment:
Spans wide time frame:
• Community groups
• Social media

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

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Intervention group
text messages re WL and WLM

Active control
text messages on child care & development

Data collection: 0, 3, 6, 9, 12 months
Anthropometric measurements, blood pressure, questionnaires, interviews

12 month intervention

SMS study participants (n=100)

Mean BMI (SD): 31.4 (4.6) kg/m^2

Overweight: 46%

Obese: 54%

Waist circumference (SD): 103.8 (10.1) cm
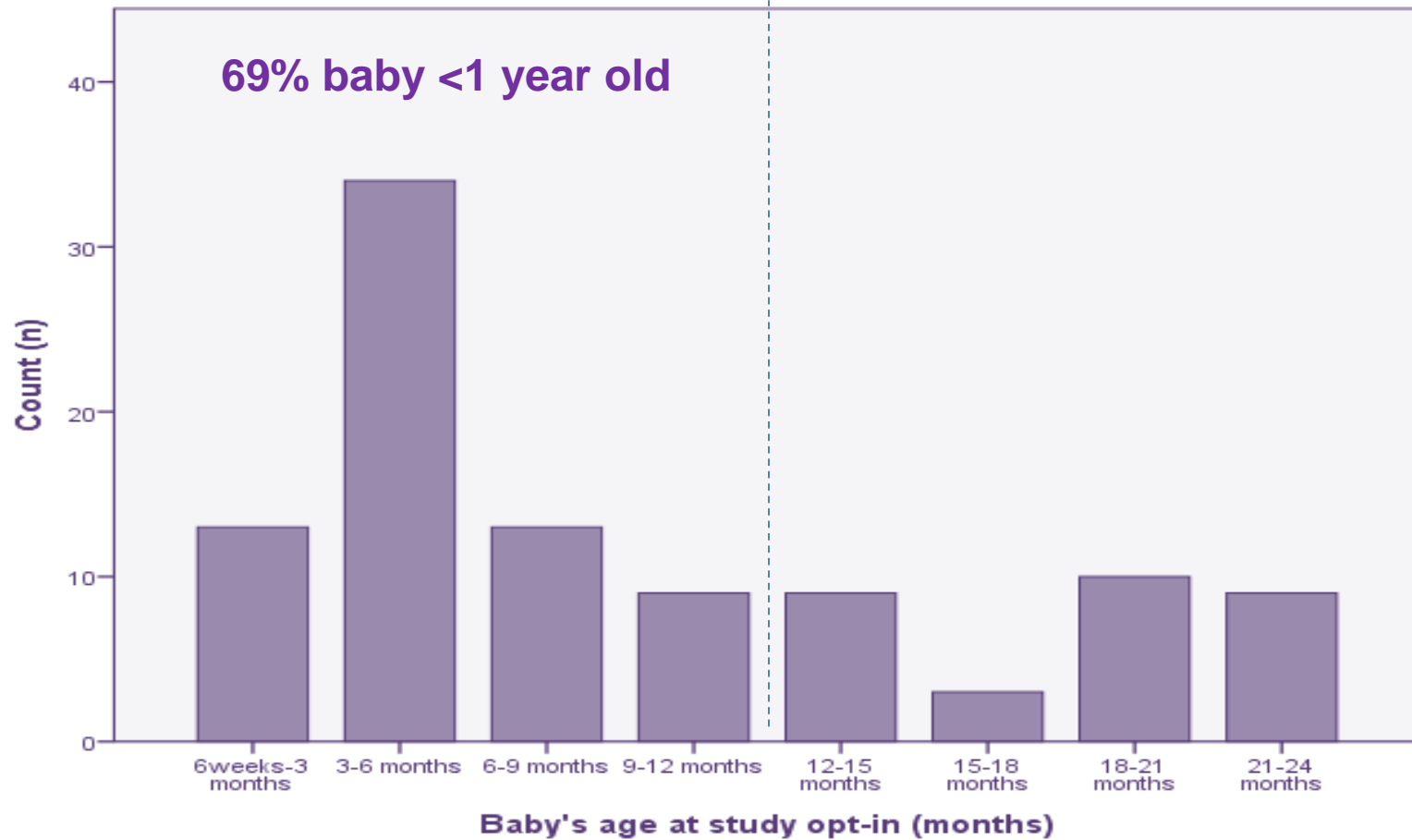
Mean age (SD): 32.5 (4.3) years

First time mum: 42%

On maternity leave: 61%

Educated $\geq$ degree level : 65%

Married: 79%

Visit at home: 91%

Postpartum stage at opt-in

69% baby <1 year old

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