Participant engagement with a text message delivered intervention for weight loss and maintenance of weight loss in the postpartum period

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Abstract

Introduction: Postpartum weight management is difficult for many mothers due to the demands of parenthood. Women have highlighted a need for support but experience barriers to engaging with lifestyle interventions hence more adaptable approaches are required. This work examined participants' engagement with a 12-month, theory-based, automated, text message (SMS) delivered, intervention supporting postpartum weight management.

Methods: SMS content was informed by: 1) the 'Health Action Process Approach' (HAPA)[1]; 2) behaviour change techniques associated with effectiveness in weight management interventions[2]; 3) women's accounts of postpartum weight-related experiences; and 4) personal and public involvement. A two-arm pilot RCT recruited women within two years postpartum, with a $BMI \geq 25 \, kg/m^2$, through community sources and social media. Women were randomised via a secure remote system to receive the intervention or an active control delivering child development messages. Participants received 353 messages during the 12 month intervention. Two-way messages were used to assess engagement: 50 messages prompted women to respond with their weight; 36 interactive messages requested participants' to respond 'Yes/No' to a question which then triggered a feedback message. Participant engagement with two-way messages was calculated as a percentage of replies sent by women and was categorised as 'high' or 'low' according to the median number of replies sent. Weight was measured at 0, 3, 6, 9 and 12 months.

Results: 51 of 100 women recruited were randomised to receive the intervention. In months 0–6, (47%) and (95%) of participants responded to the weight messages and the 'Yes/No' messages respectively. In months 7–12, the responses were (77%) and (86%) respectively. Participants who were high engagers with weight messages had greater mean weight loss compared with low engagers at all time points: at 12 months high engagers (n = 18) lost -2.66 kg and had a reduction in waist circumference at 12 months of -8.9 cm, compared to changes in low engagers (n = 18) of -0.84 kg and -3.6 cm. Likewise, high engagers with 'Yes/No' messages had greater mean weight loss compared with low engagers at all time points: at 12 months high engagers (n = 16) lost -2.87 kg and had a reduction in waist circumference of -9.4 cm, compared to changes in low engagers (n = 20) of -0.86 kg and -3.6 cm.

Discussion: The use of two-way text messages was a useful way to encourage engagement with this SMS-delivered intervention. Higher engagement resulted in more weight loss compared to low engagement.

Conflict of Interest

No