

Feasibility and Acceptability of Delivering a Postpartum Weight Loss Intervention via Facebook: A Pilot Study

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ABSTRACT

Objective: To evaluate the feasibility and acceptability of a Facebook-delivered postpartum weight loss intervention.

Methods: Overweight and obese postpartum women received a 12-week weight loss intervention via Facebook. Feasibility outcomes were recruitment, retention, engagement, and acceptability. Weight loss was an exploratory outcome.

Results: Participants (n = 19) were 3.5 (SD 2.2) months postpartum with a baseline body mass index of 30.1 (SD 4.2) kg/m². Retention was 95%. Forty-two percent of participants visibly engaged on the last day of the intervention, and 100% in the last 4 weeks; 88% were likely or very likely to participate again and 82% were likely or very likely to recommend the program to a postpartum friend. Average 12-week weight loss was 4.8% (SD 4.2%); 58% lost ≥5%.

Conclusions and Implications: Findings suggested that this Facebook-delivered intervention is feasible and acceptable and supports research to test efficacy for weight loss. Research is needed to determine how best to engage participants in social network-delivered weight loss interventions.

Key Words: postpartum, weight loss, social media, pilot study (*J Nutr Educ Behav.* 2018;50:70–74.)

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INTRODUCTION

While postpartum weight retention averages 0.5–3 kg, as many as half of women retain ≥5 kg at 1 year, and postpartum weight retention contributes to obesity for many women.^{1–3} In a recent study, 30% of women who were normal weight before pregnancy were over-

weight at 1 year postpartum, 44% of overweight women had transitioned to obesity, and 97% of obese women remained obese.² A recent meta-analysis found lifestyle interventions (diet, exercise, or both) to be modestly efficacious for postpartum weight loss in randomized controlled trials, yet almost all required in-person

participation,⁴ which is logistically challenging for many women.^{5–7}

Facebook may be an efficient platform for delivering weight loss programming to postpartum women. Facebook is currently the most popular online social network⁸ and is used by 81% of online mothers.⁹ Seventy-five percent of Facebook users engage on the platform daily, including 55% who engage multiple times per day⁸ for upward of 50 min/d.¹⁰ Many women already seek support about health and parenting from their Facebook network. A recent Pew Internet Research survey⁹ found that 66% of mothers obtained helpful parenting information from their Facebook network in the past 30 days, and 50% received social or emotional support about a parenting issue. Delivering a postpartum weight loss intervention via Facebook allows programs to meet postpartum women where they are, thus more fully integrating into their lives and daily routines.¹¹ The aim of this study was to assess the feasibility and acceptability of a postpartum weight loss intervention delivered via a private Facebook group.

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METHODS

Post-partum women were recruited from the inpatient maternity units at UMass Memorial Health Care in Worcester, MA, and the surrounding community in summer 2014. Research staff approached women on the maternity unit between 24 and 48 hours postpartum, briefly described the study, and obtained permission to contact them in 6–8 weeks. Research staff also posted flyers in the UMass Memorial Health Care outpatient obstetric clinics, on the University of Massachusetts Medical School intranet, and on the Worcester-area Craigslist. In addition, staff contacted participants from a previous research study of pregnant women who had consented to contact for future research. Research staff screened interested women for eligibility over the phone. Eligible women were aged ≥ 18 years, between 6 weeks and 12 months postpartum, overweight or obese ($25 \text{ kg/m}^2 \leq \text{body mass index} < 45 \text{ kg/m}^2$) based on height and weight self-reported at screening, comfortable participating in English, owned a scale, owned a smartphone, had a Facebook account which they logged onto at least weekly, and had permission to participate from their primary care provider or obstetrician/gynecologist. Exclusion criteria were pregnancy or plans to conceive during the study period, previous or planned bariatric surgery, medical conditions that prevented increasing physical activity or making dietary changes, medications affecting weight, inability to walk 0.25 mile without stopping, type 1 or 2 diabetes, or plans to move during the study period. The University of Massachusetts Medical School Institutional Review Board approved this study.

At a 60-minute baseline visit, participants provided informed consent, staff measured participants' height and weight, and participants reported their demographics and reproductive and weight history via a secure Web form.¹² After the intervention, participants completed an in-person visit, during which staff measured participants' weight and participants provided feedback on the intervention. Participants received a \$50 gift card after completing follow-up.

Participants received a 12-week lifestyle intervention via a secret Facebook group (ie, a private group in which membership is by invitation only, posts are viewable only by group members, and the group does not appear in searches). The intervention was based on the Diabetes Prevention Program (DPP),¹³ adapted for the postpartum period and delivery via Facebook. The DPP had established efficacy for weight loss¹⁴ and has been translated to multiple settings and populations¹⁵ including primary care via the Internet¹⁶ and the postpartum period.^{17,18} The DPP curriculum includes behavioral strategies such as self-monitoring, stimulus control, problem solving, social support, environmental restructuring, stress management, and relapse prevention.¹³ Investigators converted the didactic content of the DPP into Facebook posts or links to online articles that were included in intervention posts.¹⁹ Adaptations for the postpartum period^{17,18} included specific nutritional needs for breastfeeding women, kid-friendly recipes, links to exercise videos to do with children and/or at home, negotiating responsibilities to care for self, and challenges to lifestyle change common among postpartum women.^{5,7,20,21} Two coaches (a licensed clinical psychologist and a health promotion researcher) posted a topic of the day, provided support, and encouraged participants to engage in discussion. An obstetrician and a physical therapist with experience with perinatal women were also available to answer questions, particularly those related to their clinical expertise. Participants were provided individualized calorie goals to facilitate a weekly weight loss of 1–2 lb. For breastfeeding participants, calorie goals accounted for lactation.²² Participants were encouraged to increase physical activity gradually up to a goal of 150 min/wk moderate-intensity physical activity. Participants were encouraged to track diet and physical activity using MyFitnessPal, a free mobile app available for iPhone and Android phones (myfitnesspal.com, MyFitnessPal, Inc., San Francisco, CA).

Feasibility outcomes were recruitment, retention, engagement, and intervention acceptability. Research staff tracked recruitment efforts and documented reasons for ineligibility.

The retention rate was calculated as the rate of completion of the follow-up assessment. Objective engagement data were downloaded from Facebook using NCapture add-on to NVivo 10 software (<https://www.qsrinternational.com/nvivo/home>, QSR International, Victoria, Australia), and the number of posts and replies written by each participant and the number of posts or replies liked by each participant were summed. Some participant posts were in response to an intervention post (eg, a post asking participants to post a photo); these posts were considered replies, similar to previous research.²³ Engagement variables were not normally distributed, and thus were described by median, interquartile range (IQR), and range. Sustained engagement was calculated as the date of the latest post or reply, or date of post or comment liked.²⁴ At follow-up, participants rated on 5-point Likert scales how likely they would be to recommend the program to a postpartum friend and whether they would participate again after a subsequent pregnancy.¹⁸

Participants self-reported prepregnancy weight and gestational weight gain from the pregnancy they most recently delivered. Postpartum weight retention (in pounds) was calculated by subtracting self-reported prepregnancy weight from measured baseline weight, and significant postpartum weight retention was defined as $\geq 5 \text{ kg}$.²⁵ Absolute (pounds) and percent weight loss was calculated from weight measured at baseline and follow-up. Weight loss was calculated using weight measured during week 10 for 1 woman who moved out of state, and using weight self-reported at the end of week 12 for the 1 woman who did not complete the follow-up assessment. Clinically significant weight loss was defined as $\geq 5\%$.²⁶ Analyses were conducted in SAS software (version 9.4, SAS Institute, Inc, Cary, NC).

RESULTS

The [Figure](#) shows recruitment and retention. Forty-three percent of women screened were eligible ($n = 30$ of 70). The most common reason for ineligibility was normal weight ($n = 14$; 35% of ineligible individuals). One woman

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