

A Postpartum Weight-Loss Tracker to Guide Low-Income Postpartum Women on their Weight-Loss Journey

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Abstract

Background and Purpose: Studies have shown that postpartum weight retention is a key contributor to obesity among women. Studies have also shown that resources dedicated to postpartum weight loss are scarce. Weight tracking has been found to help with weight management during pregnancy. However, a postpartum weight-loss tracker (PPWLT) was yet to exist. This article describes the creation and initial impressions of a PPWLT that were collected via focus groups (FG) discussions with WIC participants. **Methods:** Two FG discussions (English and Spanish) were conducted at a WIC clinic in Southern California. All discussions were audio-recorded for transcription. Transcripts were analyzed using the scissor –and-sort technique. The sample consisted of ten Latina women, with a mean age of 28.7 ± 5.06 years and a mean current Body Mass Index (BMI) of 32.8 ± 7.8 . **Results:** Participants in both FGs expressed a strong interest in the PPWLT and reported a willingness to use the tracker if provided by WIC. The Spanish-speaking group had several specific suggestions to make the instructions easier to understand. **Conclusion:** We believe that this new innovative tool has the potential to impact a mother's well-being and give her an opportunity to optimize her health before a subsequent pregnancy.

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Keywords: Postpartum, Weight Loss, Weight Tracker, WIC

Introduction

Postpartum weight retention is a key contributor to obesity among women (Gore et al., 2003). Approximately 25% of women experience major weight retention after childbirth, retaining more than 4 kg and gaining more weight during the year after childbirth (Rasmussen, & Yaktine, 2009). The rates of weight retention after childbirth are even higher among low-income Hispanic women, ranging from 40 to 60% (Martin et al. 2017). Also, studies have shown that there is an overall paucity of resources dedicated to postpartum weight loss (Murray-Davis et al., 2019). Therefore, the development of a tool that is specific to postpartum weight loss could help fill a critical gap in postpartum research and counseling practices. Our formative research with low-income mothers who were participants of the Special Supplemental

Nutrition Program for Women, Infants, and Children (WIC) in Southern California indicated that an ideal postpartum weight-loss program would integrate technology and include features that foster accountability (Koleilat et al., 2020). The value of weight tracking as an effective tool that can help maintain accountability has been demonstrated in studies on weight management during pregnancy (Koleilat, Kim, & Whaley, 2017; Krukowski et al., 2017). Witnessing the success of these studies has led us to believe that a weight-loss tracker specifically tailored to the needs of postpartum WIC participants might help foster the accountability factor that WIC participants asked for during our formative evaluation using focus groups (FG) (Koleilat et al., 2020). The purpose of this study was to create a postpartum weight-loss tracker (PPWLT) and elicit users/WIC participants' initial impressions using FG discussions.

Methods

Development of the Tracker

A literature review was conducted to identify any existing postpartum weight-loss tools and determine postpartum weight-loss trends and recommendations. Several postpartum weight-loss interventions were found (Christiansen et al., 2019). However, a PPWLT was yet to exist. Based on the few available recommendations, the PPWLT in Figure 1 was created using Microsoft Office Excel (version 16, 2019, Microsoft). The goal of the tracker is to help women who gained between eleven to forty-five pounds during the 40 weeks of pregnancy to safely return to their pre-pregnancy weight by their baby’s first birthday. The tracker consists of a chart that allows women to monitor how much weight they have left to lose each week postpartum. To calculate the amount of weight left to lose, users must subtract their pre-pregnancy weight from their current weight. Next, users are prompted to locate the meeting point between the amount of weight left to lose found on the vertical axis and the number of weeks postpartum found on the horizontal axis. A meeting point within the shaded area on the tracker indicates that the user is on track to lose the weight gained during the 40 weeks of pregnancy.

Contrarily, a meeting point outside the shaded area indicates that the user is not on track to lose weight and needs to adjust their diet and physical activity to get back on track. The sharp downward slope at the beginning of the tracker shows the weight, ten pounds on average, women are expected to lose during childbirth and the first week after delivery (Mayo Clinic, 2018). The plateau slope following the steep downward slope represents the postpartum recovery period or *La Cuarentena*. *La Cuarentena*, or quarantine, refers to the forty days of postpartum recovery practiced in the traditional Latino culture (Waugh, 2011). Following the postpartum recovery period, women are recommended to lose one pound per week (Lauwers & Swisher, 2015).

User Acceptance Testing of the Tracker Two FG discussions, one in English and one in Spanish, were conducted to explore user acceptability of the PPWLT among WIC participants in Southern California. WIC staff from a WIC clinic in Southern California helped recruit FG participants using the flyer created by the research team. English- and Spanish-speaking WIC participants who were 18 years or older and had given birth to a singleton infant within the last 12 months were eligible to participate in this study. Reminder calls were made the day before each FG meeting. All participants provided written informed consent and filled out a demographic questionnaire before the start of the FG discussion. Each participant received a \$10 gift card as a token of gratitude for their participation. All materials were translated and back translated by a bilingual and bicultural translator. This study was approved by the institutional review board of the California State University, Fullerton.

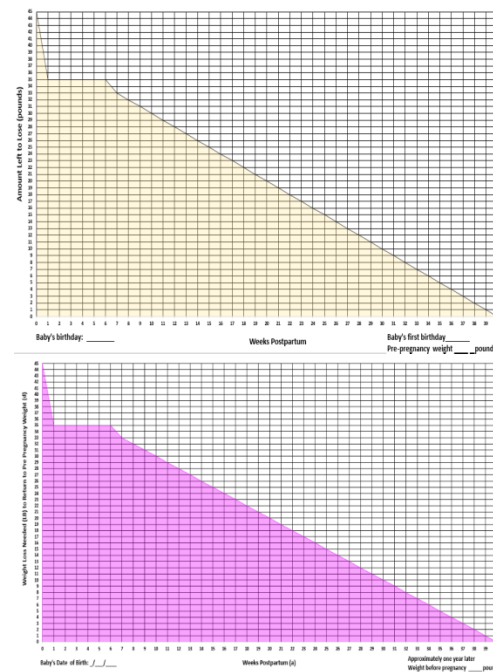


Figure 1. PPWLT Pre- and Post- FG Discussions: The figure at the top shows the PPWLT that was presented during the FG to the FG participants. The figure at the bottom shows the PPWLT after we incorporated the changes suggested by the participants during the FG discussions.

The lead author and her graduate student developed an FG guide that included eight open-ended questions that focused on the participant evaluation of the PPWLT. The lead author and her graduate student moderated the English FG discussion. A bilingual and bicultural WIC staff member facilitated the Spanish FG while the lead author assisted and took notes. FG discussions were completed within sixty to ninety minutes. All discussions were audio-recorded for transcription and data analysis purposes. Transcripts were analyzed using the scissor –and-sort technique (Stewart et al., 2007). The first step in applying this technique was to review the transcript and identify the sections that were relevant to the FG guide questions. This established a classification

system, in which major topics were coded. Once the coding process was complete, the coded copy of the transcribed interview was cut apart and sorted, so all material relevant to a particular topic was placed together. The sorted material resulted in the development of the three themes described in the results section.

Results

The sample consisted of a total of ten Latina women with four women in the English – speaking group and six women in the Spanish – speaking group. Participant characteristics are summarized in Table 1. Responses to the FG guide questions were organized into the following themes:

Table 1.
Characteristics of Study Participants (ppts)

	English-speaking ppts (N=4)	Spanish-speaking ppts (N=6)	All ppts (N=10)
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Age	28.50 (5.60)	28.8 (4.2)	28.7 (4.5)
Number of children	3.25 (1.26)	2.5 (2.51)	2.8 (2.04)
Number of children on WIC	2 (0.82)	1.83 (1.33)	1.9 (1.1)
Current Body Mass Index (BMI)	39.30 (10.48)	27.90 (2.6)	32.79 (8.78)
Pre-pregnancy BMI	(N=3) 33.88 (12.01)	(N=4) 25.25 (3.01)	(N=7) 29.57 (9.33)
Gestational weight gain (lb.)	(N=4) 17.25 (8.96)	(N=4) 21.00 (7.5)	(N=8) 19.75 (7.66)
	(N=3)	(N=6)	(N=9)
	n (%)	n (%)	n (%)
Latina Ethnicity	4 (100.0)	6 (100.0)	10 (100.0)
Marital Status			
Married	0 (0)	6 (100.0)	6 (60.0)
Never married	4 (100.0)	0 (0)	4 (40.0)
Education			
Bachelor’s Degree	0 (0)	1 (16.66)	1 (10.0)
Associate’s Degree	0 (0.0)	1 (16.66)	1 (10.0)
High school graduate	2 (50.0)	2 (33.33)	4 (40.0)
9-11 grade	1 (25.0)	1 (16.66)	2 (20.0)
Up to 8 th grade	1 (25.0)	1 (16.66)	2 (20.0)
Employment			
Homemaker	2 (50.0)	5 (83.33)	7 (70.0)
Employed	1 (25.0)	1 (16.66)	2 (20.0)
Looking for work	1 (25.0)	0 (0.0)	1 (10.0)
In WIC during last pregnancy	3 (75.0)	5 (83.33)	8 (80.0)

Initial Thoughts on the PPWLT

When asked about their initial thoughts, participants in the English-speaking group said that the tracker would help them establish weight loss goals and would enable them to visualize their weight status. Participants in the Spanish-speaking group reported that the tracker would increase their awareness of their weight status and would make them more conscious about the amount of food they consume. Overall, all participants felt that this tool could initiate a good start for mothers who are seeking to lose weight because they can see where they are in their progress. Participants thought that the tool was especially helpful for busy mothers to keep them motivated and organized in their weight loss journey. This was reflected by the following: *“It’s good to set goals to actually achieve the weight loss;” “Yeah it’s a good start to help you see where you need to go;” “It’s a great motivator and that way we can see where we are at and when we need the help.”*

Perceived Ease-of-Use and Usefulness of the PPWLT

Overall, participants in the English-speaking group found the PPWLT easy to understand and use: *“I think it is pretty straightforward. Not too much, not very little.”* Women in the English-speaking group also suggested to include an example within the instructions to illustrate how the amount of weight left to lose is calculated, as some women may not have strong math skills. Based on this suggestion, we added, to the instructions, an example that shows how to subtract the pre-pregnancy weight from the current weight (Table 2). The women also shared that they would like to have an accompanying table where they can write down their weight per week: *“...maybe like a section where you can write down your weights from the beginning to the end.”* When asked whether they would use the tracker if it were given to them as part of a brochure, all participants said that they would: *“I think this is awesome if we get provided with this from WIC, that would be really nice.”* Overall, all women in the English-speaking group were pleased to have a tool to help them track their weight loss.

Table 2.
Instructions Accompanying the PPWLT

<p>Pre-FG</p> <ol style="list-style-type: none"> 1. Input your weight at delivery date here ____ pounds 2. Calculate the amount of weight you gained during pregnancy and find this amount on the vertical axis. (<i>Current weight -Pre-pregnancy weight = Amount of weight gained.</i>) 3. Weigh yourself each week and calculate the amount of weight you have left to lose. Circle this amount on the vertical axis each week. (<i>Current weight -Pre-pregnancy weight = Amount of weight left to lose.</i>) 4. Find the amount of weight left to lose on the vertical axis and the weeks postpartum on the horizontal axis. If the meeting point is inside the shaded area, you are on track to lose the weight. If the meeting point is outside the shaded area, consult your WIC nutritionist.
<p>Post - FG</p> <ol style="list-style-type: none"> 1. How many weeks postpartum are you? (a). ____ weeks. Circle (a) on the horizontal axis . 2. How much do you weigh today? (b). ____ pounds 3. Calculate the amount of weight you have left to lose. Current weight (b) - Pre-pregnancy weight (c) = Amount left to lose (d) <i>Example: 175lbs (b) - 150lbs (c) = 25lbs (d)</i> 4. Circle (d) on the vertical axis. 5. Find the meeting point between (a) and (d) on the tracker. If the meeting point is inside the shaded area, you are on track to lose the weight. If the meeting point is outside the shaded area, consult your WIC nutritionist.

Although all Spanish-speaking participants were in favor of the tracker, they felt that the instructions accompanying the tracker were not clear. Participants suggested eliminating the step inquiring about a woman's pre-pregnancy weight, as they believed this was unnecessary and lead to confusion. Participants recommended replacing the pre-pregnancy weight question with a question asking about the number of weeks postpartum (Table 2).

It was also suggested to make the timeline on the horizontal axis clearer by revising the language and using simplified terminology. For example, the participants recommended utilizing the following terminology to better define the timeline: "*fecha de nacimiento del bebé*" in lieu of "*cumpleaños de su bebé*" and "*aproximadamente un año después*" in lieu of "*primer cumpleaños su bebé.*" This translates to baby's date of birth in lieu of baby's birthday and approximately one year later in lieu of baby's first birthday. Figure 1 displays the changes that were made to the postpartum tracker based on the suggestions of the FG participants.

Feedback on Aesthetics

All participants suggested making the tracker more aesthetically pleasing by incorporating brighter colors and enlarging the font size of the instructions: "*I think more color would be good. Something more bright to make you want to look at it;*" "*I think maybe the font should be a little bigger.*"

Discussion

The findings of this study provide a preliminary overview of a newly developed postpartum weight-loss tracking tool tailored to WIC participants in Southern California. We are aware that other types of weight-loss trackers, such as the Institute of Medicine (IOM) gestational weight gain tracker (The Institute of

Medicine [IOM] & National Research Council of the National Academies, n.d.), already exist. However, to our knowledge, this is the first weight-loss tracker tailored specifically to low-income postpartum women. Studies have shown that, given the challenges mothers face during the postpartum period, interventions that do not require participation or attendance are worth exploring and might be more effective (McKinley et al., 2018). Once trained on how to use it, participants can utilize this tool anywhere they are to visualize their weight loss and track it. Hence, in addition to the accountability factor it offers, this tool also provides busy mothers with a convenient way to track their weight loss. We will continue to refine the PPWLT. We also plan to test its efficacy, as part of a smartphone application, in helping WIC participants lose weight after childbirth.

Limitations

A limitation of this study is its small sample size. This sample of postpartum women may not be representative of all postpartum WIC participants in Southern California, given the low participation rate. During recruitment, 34 WIC participants had agreed to join the FG discussions. However, only ten participants showed up on the days of the FG discussions. An explanation for this low participation rate could be the weather. These FG discussions took place on two cold and rainy days in March 2018. Rain is not very common in Southern California, and most residents find it challenging to commute in the rain. Another limitation of this study is that all participants were Latinas. Therefore, more testing with a larger and more diverse sample needs to be conducted before we can generalize these findings. Despite these limitations, we believe that this new innovative tool has the potential to impact a mother's well-being and give her an opportunity to optimize her health before a subsequent pregnancy.

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