

# A Randomized Controlled Trial of a Community-based Behavioral Counseling Program

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## ABSTRACT

**BACKGROUND:** The US Preventive Services Task Force (USPSTF) recommends that clinicians refer obese adults for intensive, multicomponent behavioral counseling, yet most obese Americans choose a self-help approach to lose weight. The current study examined weight loss between a community-based, intensive behavioral counseling program (Weight Watchers program) and a self-help condition.

**METHODS:** A total of 292 participants were randomized to either a Weight Watchers condition (WW) (n = 147) or a self-help condition (n = 145). Participants in the WW condition were provided with 3 ways to access the treatment: weekly meetings; WW mobile application; and WW online tools. Weights were measured at baseline and at 3 and 6 months. Additionally, self-report use of access modes was collected at 3 and 6 months.

**RESULTS:** Participants in the WW condition significantly decreased their body mass index at 6 months (F = 36.7,  $P < .001$ ) and were 8.0 and 8.8 times more likely to achieve a 5% and 10% reduction in weight, respectively, compared with those in the self-help condition. In a secondary analysis, high usage of all 3 access modes resulted in the greatest weight loss ( $P < .001$ ).

**CONCLUSION:** Use of the WW program yielded significantly greater weight loss than a self-help approach, suggesting it is a viable community-based provider of weight loss treatment, as recommended by the USPSTF. Further, high usage of 3 access modes was associated with greater weight loss results.

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**KEYWORDS:** Commercial; Community-based; Intervention; Randomized; Weight loss

Obesity is a direct and indirect contributor to a plethora of chronic diseases,<sup>1</sup> yet 80% of weight loss attempts are self-directed.<sup>2</sup> Even when people needing treatment for obesity seek medical advice, there is limited evidence to support the effectiveness of primary care physicians in weight management.<sup>3</sup>

In 2012, the United States Preventive Services Task Force (USPSTF) recommended that physicians should screen all patients for excess weight and offer or refer

those identified as obese for intensive, multicomponent behavioral counseling.<sup>1</sup> Commercial and proprietary weight loss programs that can be delivered in the community have been developed. However, most of these programs have limited or no efficacy data.<sup>4</sup>

Weight Watchers (WW) has conducted many studies on its efficacy and effectiveness.<sup>5-12</sup> Overall, participants randomized to WW conditions have demonstrated significant reductions in weight in the short and long term.<sup>5-8</sup> The amount of weight loss has been shown to be enough to improve cardiovascular function,<sup>6,11,13,14</sup> and the program has been shown to be cost-effective when compared with treatment by primary care providers.<sup>10,12</sup> In summary, WW provides the intensive, multicomponent behavioral counseling recommended by the USPSTF.

Although the effectiveness of WW has already been established, there are several reasons that this program is in need of continued evaluation.<sup>4</sup> For example, the modes of

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access to help people engage and follow the program have evolved as technology has advanced, even though the core concepts of WW have remained constant. Both online tools and mobile applications are now available to be used in conjunction with traditional group meetings. The overall impact of the WW program using these modes of delivery and the impact of the different tools used within the program have yet to be evaluated.

The primary purpose of this study was first to examine the efficacy of the WW program that incorporates multiple access points compared with the self-directed approach that most Americans employ. We hypothesized that participants in the WW condition would have significantly greater reductions in body mass index (BMI) and weight compared with the self-help condition. The secondary purpose of this study was to examine the role of the modes of accessing the program within the treatment group. We hypothesized that participants within the WW condition would have greater weight loss if all access points were used frequently, compared with those who used these access points infrequently.

## METHODS

### Participants

A total of 292 overweight and obese individuals met criteria for inclusion in this randomized controlled trial and provided informed consent following an informational session and screening. In order to recruit participants, a market research firm was hired to send e-mails with a description of the study to individuals in the Danbury, Connecticut area. Eligibility criteria included having a BMI between 27 and 40 kg/m<sup>2</sup> and an age of 18 years and above. Potential participants were excluded if they reported dieting or taking medications affecting appetite or weight. Other exclusionary criteria included untreated thyroid disease, uncontrolled hypertension, history or presence of cancer, presence of implanted cardiac defibrillator or pacemaker, taking oral steroids, chronic gastrointestinal disorders, orthopedic limitations, history of heart problems, and recent and major surgery. Women who were pregnant, nursing, or planning to become pregnant also were excluded.

The majority of the sample reported being female (89.8%), married (71.4%), employed for wages (64%), and having at least some college credit (76.7%) (see [Table 1](#)). This study was approved by the Institutional Review Board for human subjects at Baylor College of Medicine. [Figure 1](#) provides a schematic of the study design and participant flow.

### Randomization

Once informed consent was obtained and eligibility was confirmed, participants were randomly assigned to either the WW (n = 147) or self-help (n = 145) condition based on a computer-generated random numbers chart. Participants in the WW group were provided with free access to a commercially available program, whereas participants in the self-help group were provided with informational materials.

### Intervention

**Weight Watchers.** The WW program was based on 4 components:

- a food plan, which was based on a balanced diet and healthy eating;
- an activity plan, designed to promote progressive physical activity increase;
- group support; and
- skills to change behavior.

Participants in the WW condition were provided with 3 modes of accessing this commercial program: weekly meetings, WW mobile application, and WW online Web site. Participants determined their weight goal and were encouraged to utilize all 3 modes of access in order to reach their goal.

The program was delivered in weekly WW meetings that consisted of facilitated group discussions about weight loss skills. The group discussions were led by WW leaders who were Lifetime members that have successfully achieved and maintained a healthy body weight and have successfully completed a leader skills training course. For this intervention, staff were trained to provide the program incorporating 3 modes of access with a focus on integrating eTools into the meeting environment, using training methods consistent with typical WW training procedures.

Participants in the WW condition were given access to WW eTools on their computer and mobile device. The WW eTools provided participants the opportunity to access food, activity, and weight-monitoring systems in addition to a library of meal ideas, recipes, and content on a variety of weight-related topics. Participants also were able to seek group support outside of the weekly meetings by participating in community message and discussion boards. These boards were established as part of the WW program in order to provide participants with the support to continue adherence to the program.

**Self-help.** Participants in the self-help group were provided with publicly available printed materials explaining basic dietary and exercise guidelines for safe weight loss. Other resources such as public library materials, Web sites, and telephone numbers of health promotion organizations

### CLINICAL SIGNIFICANCE

- Compared with a control condition, participants in a Weight Watchers condition significantly decreased their weight at 6 months and were more likely to achieve a 5% and 10% reduction in initial weight.
- Those using multiple methods of accessing the program (ie, online, mobile applications, meetings) had the greatest weight loss.
- Meeting attendance accounted for the most variance in predicting successful weight loss.

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