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Young adults' performance in a low intensity weight loss campaign

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Abstract

Young adults (YA) are underrepresented in behavioral weight loss programs and achieve poorer outcomes than older adults (OA). There has been a call to develop programs specifically targeting this age group. This study examined the performance of YA enrolled in a low intensity, team-based weight loss campaign and compared their outcomes to OA to determine the utility of such an approach for weight loss in this population. Shape Up Rhode Island 2009 was a 12-week online team-based weight loss and exercise competition (N=6795, 81% female, 94% White, age=44.7±11.2, BMI=29.4±5.9). YA was defined as 18–35 years and OA as >35 years; YA and OA were compared on enrollment, retention, weight loss and change in steps. A total of 1562 YA enrolled and 715 completed the program. Fewer YA completed compared with OA (46% vs. 62%, p<.001). However, among completers, YA achieved greater percent weight loss (−4.5±4.0% vs. −3.8±3.2%) and greater daily step change (+1578.2±3877.2 vs. +1342.2±3645.7) than OA (p's<.001). Further, more YA completers achieved a ≥5% weight loss (40% vs. 29%, p<.001). Findings were consistent in the overweight/obese subsample, and using ≤25 years of age as the cut off for YA. Weight losses among YA in this low-intensity weight loss campaign were quite promising, with over 700 YA completing the program and on average achieving a 4.5% weight loss. Indeed, the potential public health impact of such an approach is substantial; future efforts to develop programs for this age group may benefit from using a low intensity, team-based approach.

Young adulthood is a developmental period that is characterized by a variety of unhealthy weight-related behaviors (1–4) and substantial obesity risk (2,4). Despite being at increased risk, young adults are underrepresented in behavioral weight loss (BWL) programs, and the few who do enroll have poorer retention and achieve less weight loss than older adults (5). Recently, there has been a call to develop weight control programs specifically targeting this age group (6), but limited evidence exists to inform the development of such programs.

It is possible that this age group does not require the ongoing contact that is typical of standard adult programs, and that a less intensive intervention may be more attractive and produce significant weight losses in this population. One approach that has gained popularity recently and may have broader appeal to young adults involves participation in community-wide, team-based weight loss competitions, such as Shape Up Rhode Island (7), Live Healthy Iowa (8), and Lighten Up Georgia (9). These programs are typically low intensity, delivered mostly if not entirely via the internet, and maximize cooperation and

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competition among participants. Further, data indicate that they are able to reach a large number of participants (10–11) and result in clinically significant weight losses (10). However, it remains unknown whether these programs appeal to young adults, specifically, or whether young adults can achieve meaningful weight loss through such low intensity campaigns. The current study examined the performance of young adults enrolled in SURI 2009 and compared their outcomes to older adults in the same program to determine the utility of such an approach for weight loss in this population.

Methods

Participants

Eligible participants for Shape Up Rhode Island (SURI) 2009 were ≥18 years old and lived or worked in Rhode Island. They were recruited through earned media, email marketing, and materials distributed to local employers. Participants enrolled in teams of 5 to 11 members and chose to compete on weight loss, minutes of activity, and/or pedometer steps. A total of 6,795 participants enrolled in the weight loss division and provided baseline weight data.

Procedures for SURI 2009

SURI 2009 was a team-based competition; teams were formed by a self-selected captain who recruited members. The campaign was 12 weeks and had 6 rounds. Participants received a pedometer and a book to record their weight and activity and had access to an online tracking system. At the end of each round, participants entered their weight, exercise minutes, and pedometer steps via the online system and received feedback on their performance relative to personal and team goals. The program also offered optional in-person activities including a kick-off event, free fitness events, and healthy eating and activity workshops and newsletters.

Measures

Demographics—Participants provided self-report demographic data (i.e., gender, age, ethnicity and race).

Weight—Participants reported their weight and height at the start of the campaign and their weight at the end of each round. Previous studies have documented only a small discrepancy between self-reported and observed weight in SURI participants (10).

Statistical analyses

Age was treated as a categorical variable using 18–35 years as the criteria for young adult (YA). We selected 35 years as our cut off because this is the upper cut off used by NIH to define young adult (12). Exploratory analyses were also conducted using 18–25 years to define YA given arguments that this is a distinct developmental period (13). For completers, percent weight loss was calculated as follows: ((BL weight − Round 6 weight)/BL weight) *100. For non-completers, the last observation carried forward method was used for their Round 6 weight. Group differences were analyzed using analyses of variance or chi square tests for continuous and categorical variables, respectively. Baseline values were included as covariates when examining change scores. All analyses were conducted using SPSS, Version 14.0.

Results

A total of 1,562 young adults (YA) ≤35 years old enrolled in SURI 2009, representing 23% of participants. Of note, 70% of YA were overweight or obese (i.e., BMI≥25) and on

average had a slightly lower baseline BMI than older adults (29.1 ± 6.3 vs. 29.5 ± 5.8, p<.05). There were no significant differences between groups on gender or baseline weight. YA were 7.5% Hispanic/Latino, compared with 2.2% of OA (p<.001); and YA were 90.7% White, 4.4% Black/African American and 2.6% Asian, whereas OA were 95.3% White, 2.5% Black/African American and 1.2% Asian (p<.001).

Data for completers are displayed in Table 1. Compared with OA, fewer YA completed the program and YA completed fewer tracking activities (see Table 1). However, among completers, YA achieved greater percent weight loss than OA (p<.001). Further, a greater percent of YA completers achieved ≥5% weight loss (p<.001). YA also achieved greater daily step change compared with OA (p<.001, see Table 1). All findings were consistent when examining overweight/obese participants separately (see Table 1). Using last observation carried forward (LOCF), there was no difference in weight loss between YA and OA (−2.8±3.1kg for YA vs. −2.6±2.8kg for OA, p=.14 for full sample; −3.1±3.3kg for YA vs. −3.0±3.0kg for OA, p=.20 for overweight/obese subsample).

All findings were consistent using ≤25 years old as the cut off for YA. Participants ≤25 years represented 4% of the sample (n=279); of those, 63% were overweight or obese. Only 33% of participants in this age group completed the program, but those who did achieved a 5±3.7% weight loss on average.

Discussion

Our findings suggest that team-based public health campaigns may be an effective approach to recruiting young adults (YA) and achieving clinically meaningful weight losses. Over 1500 YA enrolled in SURI 2009, representing 23% of participants, compared with only 7% in typical clinic-based programs (5). This suggests that a low intensity, team-based weight loss campaign like SURI may have more appeal to this age group than typical clinic-based weight loss programs. There are a variety of reasons that this type of program may resonate with young adults, including the limited time commitment, online system, and the ability to join with their friends as members of a team. Future studies should seek to formally test these components to determine which aspects of the SURI program are most appealing to young adults.

Not surprisingly, retention among YA in SURI was poorer compared with OA, which is consistent with findings from randomized trials (5). However, because these campaigns have far greater reach than our standard programs, the potential impact remains quite high, even if retention is less than ideal. Moreover, weight losses were very promising; on average YA who completed all 12 weeks achieved a 4.5% weight loss, which was significantly better than OA. YA completers also demonstrated greater improvements in physical activity compared with OA completers; this is particularly relevant for this age group given the decline in activity associated with the transition into young adulthood (3).

The potential public health impact of developing low intensity weight loss campaigns to address the growing needs of this age group is considerable; 70% of the YA who enrolled in SURI were overweight or obese (OW/OB). Moreover, when examining OW/OB participants separately, nearly half of YA completers achieved ≥5% weight loss. The ability to achieve clinically meaningful weight losses in a substantial subset of this high-risk population could stand to have a large overall health impact.

Limitations of this study include self-report data, a predominantly non-Hispanic White sample, lack of data on longer term weight loss, and the descriptive nature of the study. Previous studies have documented a relatively small discrepancy between self-report and measured weight in SURI participants specifically (10). Efforts should be made to evaluate

the efficacy of a similar program in a more diverse sample. A similar low intensity program should be evaluated within the context of a randomized trial before firm conclusions about its appeal and utility for this age group can be made. However, the current findings strongly suggest that this type of program may have greater appeal with YA than standard programs, and the weight losses achieved were notable. Further, we may be able to improve already significant outcomes by simply augmenting existing programs like SURI (14). For example, future trials could examine whether adding occasional in-person weigh-ins to a program like SURI would increase accountability and improve outcomes in this age group. It is also possible that the team aspect of SURI may be particularly appealing to YA and could be used to bolster outcomes; recent findings have demonstrated that among OW/OB SURI participants, individual weight loss is influenced by team weight loss (15).

In sum, enrollment and weight loss outcomes among YA in this low intensity, team-based weight loss campaign were quite promising, with over 700 YA completing the program and on average achieving a 4.5% weight loss. Furthermore, average weight losses were higher among YA than OA. Indeed, the potential public health impact of such an approach is substantial, suggesting that future efforts to develop weight loss programs for YA may benefit from using a low intensity, team-based approach.

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Table 1

Change in weight and physical activity for completers in the 12-week campaign

Full Sample N=6,795	**Older Adults n=5,233**	**Young Adults n=1,562**	**Comparison**
			p-value
% Completed Program	62%	46%	<.001
% of Rounds Reported on Weight	80%	70%	<.001
% of Rounds Reported on Steps	74%	63%	<.001
Wt Δin kg, M±SD	−3.2±3.0	−3.8±3.7	<.001
% Weight loss, M±SD	−3.8±3.2%	−4.5±4.0%	<.001
Achieved ≥5% wt loss	29%	40%	<.001
Daily steps Δ, M±SD	+1342.2±3645.7	+1578.2±3877.2	<.001

OW/OB Participants Only n=5,133	**Older Adults n=4,037**	**Young Adults n=1,096**	**Comparison**
			p-value
% Completed Program	60%	46%	<.001
Wt Δin kg, M±SD	−3.7±3.2	−4.4±3.9	<.001
% Weight loss, M±SD	−4.2±3.3%	−5.1±4.0%	<.001
Achieved ≥5% wt loss	33%	46%	<.001
Daily steps Δ, M±SD	+1361.1±3563.4	+1916.9±4013.9	<.01

[*] *Note*: Baseline values included as a covariate in change analyses