Published in final edited form as:

Obesity (Silver Spring). 2011 September ; 19(9): 1901–1904. doi:10.1038/oby.2011.203.

Beliefs About Weight Gain Among Young Adults: Potential Challenges to Prevention

Jessica Gokee LaRose^{1,2}, Amy A. Gorin³, Megan M. Clarke³, and Rena R. Wing^{1,2}

¹Department of Psychiatry and Human Behavior, Alpert Medical School of Brown University, Providence, Rhode Island, USA

²Weight Control and Diabetes Research Center, The Miriam Hospital, Providence, Rhode Island, USA

³University of Connecticut, Department of Psychology, Center for Health, Intervention, and Prevention, Storrs, Connecticut, USA

Abstract

This study assessed young adults' beliefs about weight gain with the goal of improving intervention efforts with this high-risk group. A total of 1,347 incoming freshman (45% male; 81% non-Hispanic white; 18.6 ± 1.7 years; $BMI = 23.3 \pm 2.3 \text{ kg/m}^2$) at a large state university in the Northeast completed a survey designed to assess: (i) degree of concern about weight gain, (ii) level of interest in weight control programs, and (iii) the most acceptable setting for an intervention. Perceptions about freshman weight gain were consistent across gender, with men and women reporting that the average student gains $5.4 \pm 1.9 \text{ kg}$ and $5.6 \pm 1.9 \text{ kg}$ respectively. Men in general were less concerned about weight gain ($P < 0.001$) and reported they would have to gain $6.2 \pm 4.2 \text{ kg}$ before becoming concerned compared to $3.1 \pm 1.7 \text{ kg}$ among women ($P < 0.001$). Overweight (OW) men were more concerned about gaining weight than normal weight (NW) men ($P < 0.001$) and indicated they would have to gain less weight before becoming concerned ($5.0 \pm 3.0 \text{ kg}$ vs. $6.7 \pm 4.5 \text{ kg}$, $P < 0.001$). Fewer men reported they would join a program to prevent weight gain (17% men vs. 40% women, $P < 0.001$); the percentage of men willing to join a prevention program did not vary by weight status ($P = 0.59$). Both men and women were most likely to report a willingness to attend classes on a local college campus compared to other settings. Findings highlight the challenges of engaging young adults in weight gain prevention programs, particularly young men, and are discussed in terms of implications for improving recruitment efforts and intervention development with this population.

INTRODUCTION

Weight gain in young adults is a serious problem with medical and public health consequences (1-3). Despite well documented risk in this group, it is less obvious how or

where to best intervene. Traditional behavioral weight control programs are not appealing to young adults (4); particularly for young men who are virtually nonexistent in these programs. Thus, it is critical that we find novel ways of reaching this high-risk population.

One possible setting for effectively targeting young adults may be college campuses. Nearly half of Americans 17–24 years old are enrolled in postsecondary education (5) and over 30% of the college population is overweight (6). It is well established that these years are associated with a host of unhealthy weight control behaviors (7), that weight gain is common among college students (8–10) and that men gain as much, if not more, weight than women (8,9). Although some weight gain prevention studies have targeted college students, extant research has been conducted almost exclusively with women (11–13); those few programs including men and women have been met with limited success (14). To our knowledge, no prevention studies exist that target college males, and little is known about how young men and women may differ in their concerns about weight gain and preferences for treatment. Thus, this study sought to gain a better understanding of this high-risk and understudied population to inform intervention development.

METHODS AND PROCEDURES

Participants

Incoming freshman at a large Northeast university participated in the parent study ($n = 1,695$). For our analyses, we included participants with a BMI between 20 and 30 because they represent the ideal range for prevention efforts (i.e., BMI <20 may be at higher risk for disordered eating and BMI >30 would be candidates for weight loss). This resulted in a sample of 1,347 participants (45% male; 81% non-Hispanic white; 18.6 ± 1.7 years; BMI = 23.3 ± 2.3 kg/m²).

Procedure

Participants were recruited through a Psychology participant pool, completed the survey in a group setting, and received one research credit for completion. All procedures were approved by the University's institutional review board.

Measures

Demographics—Participants provided self-report demographic data; self-report height and weight was used to calculate BMI.

Treatment development survey—Items targeted two key components of the Health Belief Model (15)—perceived severity of the problem and perceived susceptibility, and preferences for intervention.

Participants were asked the following: how concerned they were about gaining weight in the next year? (8-pt Likert scale, not at all to extremely); how much weight they think the average student gains in the freshman year?; how much they would have to gain before becoming concerned?; how much they would have to gain before doing something about it; if they wanted to gain, maintain or lose weight in the next 3 months; and if they would be willing to join a program designed to help them “stay at your current weight” or “lose

weight” (yes/no). They were also given a framework for typical weight control programs and asked if they would attend a program held in a variety of settings (definitely would to definitely would not).

Statistical analyses

Analyses were conducted using SPSS version 14 (SPSS, Chicago, IL). Overweight (OW) was defined as a BMI of 25–30 and normal weight (NW) was defined as a BMI of 20–24.9. Descriptive data are provided where appropriate. Chi square analyses were used to examine group differences on categorical variables, and analysis of variance was used for continuous variables.

RESULTS

Perceived severity and susceptibility

Data are displayed in Table 1. Perceptions about the magnitude of freshman weight gain were consistent across gender and weight status. However, men in general were less concerned than women about gaining weight and reported they would have to gain more weight before becoming concerned or taking action compared with women (see Table 1). For men, these findings varied by weight status, with OW men expressing more concern about weight gain than NW men and reporting a smaller magnitude of weight gain needed before they would be concerned or take action. Although OW women were more concerned about weight gain than NW women, there were no differences in the magnitude of weight gain needed to cause concern or action (see Table 1).

Interestingly, 29% of men were overweight based on their BMI, but when asked their perception of their weight status only 14.2% indicated they thought they were OW. In contrast, only 16% of women were OW based on their BMI but 23% reported they were OW. Of note, the misclassification among men occurred most frequently in those who were closest to the BMI cut off for OW. Of those with a BMI of 25–26, only 38% indicated they were overweight, compared to 46% of those with a BMI of 26–28 and 96% of those with a BMI of 28–30.

Preferences for intervention

Women were more interested in weight control programs than men; weight gain prevention programs were particularly unappealing to men, regardless of weight status (see Table 1). Weight-related goals varied by weight status; more NW men wanted to gain weight versus maintain or lose (47%, 37%, and 16%, respectively, $P < 0.001$) and more OW men wanted to lose weight versus maintain or gain (56%, 27%, and 17%, respectively, $P < 0.001$). For women, the majority of OW (95%) and NW (74%) women wanted to lose weight.

Easy access to treatment was important for both genders; 46.2% of men reported a willingness to attend classes on a college campus, compared to 34.8% online, 32.3% at a community center or YMCA, and 20.5% at a hospital or research center. More women reported willingness to attend classes at all locations compared with men (P 's < 0.001); college campuses were also the most popular for women (62%), followed by a community

center or YMCA (54.1%), online (44.6%), and a hospital or research center (27%). Preferences for treatment location did not vary by weight status for either gender.

DISCUSSION

Perceptions about what represents “typical” freshman weight gain appear higher than what is actually observed in studies (8,9). Despite acknowledging weight gain as a problem, the level of concern among men about preventing weight gain, and their investment in taking preventative action, are quite limited. Indeed, males were less concerned about gaining weight than females, and even OW men reported they would need to gain 4.5 kilograms before taking action. When asked about weight goals, the picture is a bit more promising; 37% of NW men and 27% of OW men endorsed a weight maintenance goal, and more than half of OW men stated their goal was weight loss. However, willingness to join a weight control program was limited, particularly for the prevention of weight gain. This is consistent with previous findings that young adults are difficult to recruit and retain in weight control programs (4), and suggests that this group may be more likely to try and manage their weight on their own and/or that standard weight management programs are unappealing to this population.

Of note was the discrepancy between males’ perceived and actual weight status, particularly for those who were relatively close to the BMI cut off for overweight. Although BMI was based on self-report data, they appeared to have a limited understanding of whether they were overweight based on their current weight. This suggests that perhaps even high-risk college males do not see themselves as in need of help, which may further contribute to difficulties engaging this group in intervention programs. It is possible that targeting young adults for a prevention program as they enter university could serve as a “teachable moment.” Given perceptions regarding college-related weight gain, this may be an ideal time to engage this group in intervention programs. Further, offering programs on a college campus may be an effective way to capture this audience given that both men and women indicated they would prefer to attend meetings held on a college campus rather than in other settings, including online.

Limitations of this study include self-report height and weight and a convenience sample. However, the sample was large, represented the population of interest, and was not recruited specifically for a weight-related study, which may provide a more accurate picture of the challenges associated with reaching this group. Further, self-report height and weight data have been shown to be highly correlated with measured data in college students (9).

According to the Health Belief Model (15), to produce health behavior change, individuals must perceive themselves as susceptible to a serious health threat and believe that acute action will produce benefits. These data indicate that college freshman believe they are susceptible to weight gain, and a substantial proportion are interested in taking action to manage their weight. However, interest in joining a formal program was limited, which coupled with previous findings (4), suggests that traditional behavioral weight control programs are not appealing to this group. Thus, additional formative work is needed to help guide intervention efforts with young adults, particularly among understudied men.

Acknowledgments

Preparation of this manuscript was supported in part by K23DK083440 from the National Institute of Diabetes and Digestive and Kidney Diseases to JGL and U01HL090864 from the National Heart, Lung, and Blood Institute to RRW.

References

1. Truesdale KP, Stevens J, Lewis CE, et al. Changes in risk factors for cardiovascular disease by baseline weight status in young adults who maintain or gain weight over 15 years: the CARDIA study. *Int J Obes (Lond)*. 2006; 30:1397–1407. [PubMed: 16534519]
2. Lewis CE, Jacobs DR Jr, McCreath H, et al. Weight gain continues in the 1990s: 10-year trends in weight and overweight from the CARDIA study. *Coronary Artery Risk Development in Young Adults*. *Am J Epidemiol*. 2000; 151:1172–1181. [PubMed: 10905529]
3. Norman JE, Bild D, Lewis CE, Liu K, West DS. CARDIA Study. The impact of weight change on cardiovascular disease risk factors in young black and white adults: the CARDIA study. *Int J Obes Relat Metab Disord*. 2003; 27:369–376. [PubMed: 12629565]
4. Gokee-LaRose J, Gorin AA, Raynor HA, et al. Are standard behavioral weight loss programs effective for young adults? *Int J Obes (Lond)*. 2009; 33:1374–1380. [PubMed: 19786967]
5. US Census Bureau. [14 September 2010] Financing the Future: Postsecondary Students, Costs, and Financial Aid: 2001–2002. <http://www.census.gov/population/www/socdemo/FTF-tabs.html>
6. American College Health Association. American College Health Association National Health Assessment Spring 2006 Reference Group data report (abridged). *J Am College Health*. 2007; 55:195–206.
7. Nelson MC, Story M, Larson NI, Neumark-Sztainer D, Lytle LA. Emerging adulthood and college-aged youth: an overlooked age for weight-related behavior change. *Obesity (Silver Spring)*. 2008; 16:2205–2211. [PubMed: 18719665]
8. Holm-Denoma JM, Joiner TE, Vohs KD, Heatherton TF. The “freshman fifteen” (the “freshman five” actually): predictors and possible explanations. *Health Psychol*. 2008; 27:S3–S9. [PubMed: 18248103]
9. Lloyd-Richardson EE, Bailey S, Fava JL, Wing R. Tobacco Etiology Research Network (TERN). A prospective study of weight gain during the college freshman and sophomore years. *Prev Med*. 2009; 48:256–261. [PubMed: 19146870]
10. Cluskey M, Grobe D. College weight gain and behavior transitions: male and female differences. *J Am Diet Assoc*. 2009; 109:325–329. [PubMed: 19167962]
11. Eiben G, Lissner L. Health Hunters—an intervention to prevent overweight and obesity in young high-risk women. *Int J Obes (Lond)*. 2006; 30:691–696. [PubMed: 16276359]
12. Matvienko O, Lewis DS, Schafer E. A college nutrition science course as an intervention to prevent weight gain in female college freshmen. *J Nutr Educ*. 2001; 33:95–101. [PubMed: 12031189]
13. Levitsky DA, Garay J, Nausbaum M, Neighbors L, Dellavalle DM. Monitoring weight daily blocks the freshman weight gain: a model for combating the epidemic of obesity. *Int J Obes (Lond)*. 2006; 30:1003–1010. [PubMed: 16446748]
14. Hivert MF, Langlois MF, Bérard P, Cuperrier JP, Carpentier AC. Prevention of weight gain in young adults through a seminar-based intervention program. *Int J Obes (Lond)*. 2007; 31:1262–1269. [PubMed: 17356531]
15. Rosenstock IM, Strecher VJ, Becker MH. Social learning theory and the Health Belief Model. *Health Educ Q*. 1988; 15:175–183. [PubMed: 3378902]

Table 1
Gender and weight status comparison for perceived severity and susceptibility to weight gain

Item	Males only			Females only			Total sample (N = 1,347)	
	NW (n = 433)	OW (n = 173)	P value	NW (n = 628)	OW (n = 113)	P value	Males (n = 606)	Females (n = 741)
How much weight do you think the average college student gains during his/her freshman year?	5.4 ± 1.8 kg	5.6 ± 2.1 kg	0.34	5.6 ± 1.9 kg	5.9 ± 1.9 kg	0.15	5.4 ± 1.9 kg	5.6 ± 1.9 kg
How concerned are you about gaining weight over the next year? (8-pt scale, not at all to extremely)	3.0 ± 2.1	3.5 ± 2.4	<0.01*	5.3 ± 2.1	5.8 ± 2.0	<0.01*	3.2 ± 2.2	5.4 ± 2.1
How much weight would you have to gain before you would be concerned? (absolute weight using kg)	6.7 ± 4.5 kg	5.0 ± 3.0 kg	<0.001*	3.1 ± 1.7 kg	3.2 ± 1.7 kg	0.82	6.2 ± 4.2 kg	3.1 ± 1.7 kg
How much weight would you have to gain before you would do something about it? (absolute weight using kg)	4.5 ± 3.3 kg	6.9 ± 5.1 kg	<0.001*	3.1 ± 2.0 kg	3.2 ± 2.0 kg	0.64	6.2 ± 4.8 kg	3.1 ± 1.9 kg
Magnitude of weight gain before becoming concerned (reported in percent body weight)	9%	6%	<0.001*	5%	4%	<0.01*	8%	5%
Would you join a program that was designed to help you stay at your current weight? (yes/ no; % reporting yes)	18%	16%	0.59	43%	25%	<0.001*	17%	40%
Would you join a program that was designed to help you lose weight? (yes/ no; % reporting yes)	10%	34%	<0.001*	59%	75%	<0.01*	17%	61%

All gender differences remained when comparing normal weight participants and overweight participants separately (P 's < 0.001).

NW, normal weight; OW, overweight.

* Significant difference for that comparison.