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Physician Weight-Related Counseling Is Unrelated to Extreme Weight Loss Behaviors Among Overweight and Obese Adolescents

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Abstract

Some physicians may be hesitant to counsel overweight and obese adolescents about weight because of concerns that such counseling may result in extreme weight loss behaviors and the subsequent development of eating disorders. We compared self-reported extreme weight loss behaviors in 535 overweight/obese adolescents prior to receiving weight-related counseling during primary care visits, and again after 3 months. We found no change in fasting (7.7% vs 6.3%, $P = .45$), and decreases in diet pill use (4.1% vs 1.7%, $P = .003$) and laxative use/vomiting (2.6% vs 1.0%, $P = .02$). Three months following their medical appointment, patients were also less likely to report trying to lose weight in general (80.0% vs 75.6%, $P = .04$). Physicians should be reassured that providing weight-related counseling to their obese adolescents is unlikely to induce extreme weight loss behaviors. Frequent counseling may be required in order to help patients maintain motivation to attain a healthy weight.

Keywords

eating disorders; obesity; adolescents; primary care

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Author Contributions

All authors were involved in design of the study, acquisition of the data, revision of the manuscript, approved the final manuscript as submitted and agree to be accountable for all aspects of the work. TB, PL, and CJC made substantial contribution to analysis and interpretation of the data; TB drafted the initial manuscript.

Declaration of Conflicting Interests

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Introduction

The alarmingly high rate of obesity in the United States is well documented.¹ Although the prevalence may have plateaued over the past decade, more than one-third of adults and 17% of children and adolescents are obese. The etiology of the current epidemic is complex, involving increased availability of inexpensive calorie dense foods and increased sedentary behaviors, among many other factors.² The health implications are numerous, including dyslipidemia, hyperglycemia, and hypertension,³ which result in the need for expensive screening and assessments in youth.⁴ Adolescent obesity therefore needs to be addressed in multiple domains that include programs to improve access to healthy foods, decrease sedentary activity while increasing physical activities in schools, communities, and families.⁵ In addition to these public health efforts, expert committee recommendations have emphasized the role of the primary care physician in preventing, assessing, and treating child and adolescent obesity.⁶

More than 15 years ago, it was reported that overweight and obese youth were more likely to participate in extreme weight loss behaviors.^{7,8} A more recent study suggests that while fewer healthy-weight adolescents engage in extreme weight loss behaviors,⁹ obese and overweight adolescents still continue to be more likely to report these unhealthy behaviors.¹⁰ It is therefore understandable that, despite expert opinion to the contrary,¹¹ many physicians are concerned that their messages regarding weight management may inadvertently result in their patients developing eating disorders. Furthermore, it might concern physicians that some adolescents with well-intentioned attempts to lose weight may find that these efforts spiral out of control into severe eating disorders.¹² Supporting this concern, more than one-third of patients seeking treatment for anorexia nervosa have a past history of being overweight or obese.¹³ Although previous studies have found that community and school-based obesity prevention programs have had minimal impacts on disordered eating behaviors, the impact of office-based counseling regarding obesity is unknown.¹⁴ Given these concerns, the purpose of this study was to examine whether patient reported extreme weight loss behaviors in overweight and obese adolescents being seen for annual health maintenance and chronic care encounters increased following weight-related counseling by physicians.

Methods

Data were obtained from Teen CHAT, a 3-phase randomized trial designed to enhance physician communication with overweight and obese adolescent patients.¹⁵ We identified primary care pediatrics and family medicine practices in 2 counties in North Carolina, which included rural, suburban, and urban settings. Forty pediatricians and 9 family physicians agreed to have their annual visit encounters with overweight/obese adolescents audio recorded. Phases of the clinical trial included a baseline assessment, a post-motivational interviewing training assessment, and a third assessment when physicians were provided with a written patient-summary report regarding patient weight-related behaviors. Assessments included audio recording of physician-patient encounters and patient telephone interviews. Patients were recruited from routine well-visit and chronic care appointments for patients 12 to 18 years old with a body mass index >85th percentile. These patients were

sent introductory letters from the treating physician describing the study. If the patient or parent did not decline participation, research staff called parents and adolescent to obtain verbal consent/assent and administer a baseline survey with the adolescent. Written consent/assent was then obtained on the day of the encounter that was audio recorded. Audio recorder cases were placed in all rooms, so physicians were blinded to audio recording. The audio recorder was only placed in the case when a Teen CHAT patient was being seen. Patients also completed surveys immediately following the visit and three months later. Two independent coders blinded to study arm were trained to mark all discussions of the 6 weight-related factors. For the purpose of the current analysis, only encounters that included a conversation about weight and weight-related behaviors were included.

Extreme weight loss behaviors were assessed at baseline and follow-up surveys with 3 “yes” or “no” questions: (1) *Have you ever gone without eating for 24 hours or more (also called fasting) to lose weight or to keep from gaining weight?* (2) *Have you ever taken any diet pills, powders, or liquids without a doctor’s advice to lose weight or to keep from gaining weight? (Do not include meal replacement products such as SlimFast), and (3) Have you ever vomited or taken laxatives to lose weight or to keep from gaining weight?* Nonextreme weight loss behaviors were assessed with 2 “yes” or “no” questions: (1) *Have you ever exercised to lose weight or to keep from gaining weight?* and (2) *Have you ever eaten less food, fewer calories, or food low in fat to lose weight or to keep from gaining weight?* as well as one multiple choice question: (3) *Which of the following are you trying to do about your weight? Lose weight, Gain weight, Stay the same weight, or Nothing.* For our analysis, this final question was dichotomized to who answered “trying to lose weight” and the remainder of responses were classified as “not trying to lose weight.”

Data were analyzed using SAS for Windows (Version 9.2, SAS Institute, Cary, NC) For these analyses, the weight loss behaviors that were assessed at baseline and follow-up were collapsed across phases and arms due to low event rates in the extreme weight loss behaviors. McNemar’s tests were used to examine differences in nonextreme and extreme weight loss behaviors between baseline and follow-up. All research activities were approved by the Duke University Institutional Review Board.

Results

Over the 3 phases of the study, 535 adolescents completed surveys prior to their medical appointments and had complete audio recordings of these appointments. Of these adolescents, 61 were lost to follow-up, leaving 474 completed surveys 3 months following the audio-recorded visit. Weight and the adolescent’s overweight/ obese status were discussed in 527 out of the 535 visits. Immediately following the appointment, 30 of the adolescents who had a documented discussion of weight did not recall these weight-related discussions. The mean age of patients was 14.6 years, 57% were female, and a little more than half were African American (Table 1). Adolescents were asked to rank how concerned they were about their body shape or size, ranging from 1 (not very concerned) to 5 (very concerned). Overall, 11% reported being very concerned about their body shape/size, and the average level of concern was 2.4 on the 5-point scale (Table 2).

Despite this lack of concern about body shape/size, prior to the doctor's appointment, 80% of adolescents reported trying to lose weight, with 93% exercising and 71% eating fewer calories to lose weight. Some reported extreme weight loss behaviors prior to the doctor's appointment, with 8% fasting, 4% using diet pills, and 3% reporting laxative use or self-induced vomiting to lose weight. The documented office-based counseling that adolescents received appeared to have little effect on their weight-related behaviors. Three months following the appointment, 76% of adolescents were trying to lose weight, including 86% exercising and 58% eating fewer calories. Additionally, fewer adolescents reported diet pills use (4% vs 2%, $P = .02$), and reported laxative use or vomiting (3% vs 1%, $P = .02$) to lose weight. Results are summarized in Tables 3 and 4.

Discussion

In this large study of audio-recorded annual preventive health visits for adolescents, conversations and counseling regarding weight in overweight and obese adolescents did not increase reported extreme weight loss behaviors. These results should offer reassurance to practicing medical providers that they are unlikely to "induce" an eating disorder in their obese patients simply by raising this important topic. Three months following their annual health maintenance examinations, adolescents were in fact *less* likely to be exercising or eating less to lose weight, and were *less* likely to report diet pills and vomiting/laxative use. This may reflect the low levels of weight concern reported by this population at baseline, which may affect their future commitment to make behavioral changes related to weight. Alternatively, the 3-month interval between the physician's appointment and the follow up survey may reflect a priming effect on patients' answers. That is, simply knowing that they have an upcoming appointment with a physician may influence patients' desire to participate in weight-control behaviors. The follow up surveys were administered 3 months later at a time when most patients did not have impending medical appointments and thus had not been primed to consider whether or not they were at a healthy weight. This emphasizes the role that medical appointments may play in helping adolescents develop motivation for healthy habits and is consistent with the finding that physician advice regarding weight and explicitly diagnosing overweight or obese status has been shown to be associated with more realistic perceptions of their patient's own weight leading to a greater desire to lose weight and subsequent weight loss attempts.¹⁶ Physician advice regarding weight loss for obese and overweight patients is a key component of patient behavior change, particularly in adults.¹⁷ Behavior change in adolescents is likely related to the frequency of counseling provided, and the adolescents are likely to revert to old habits without ongoing interventions.¹⁸ Our Teen CHAT intervention improved physician communication skills and adolescent patients' motivation to change diet and physical activity,¹⁵ but we were unable to identify any relationship between improved communication skills in physicians and weight or weight-related behaviors in patients. Adolescents may require appointments more frequently than yearly to help them translate their motivation into action.

Our current study has a number of limitations, most notably that we operationalized extreme weight loss behaviors with only 3 questions related to fasting, diet pill use, and laxative use or vomiting. Furthermore, few patients reported extreme eating disorder behaviors and our analyses do not account for potential confounding factors associated with these behaviors.

While these self-reported behaviors are important, we did not assess other attributes that may be associated with the future development of eating disorders such as more formal assessment of frequency of dieting, preoccupation with weight, body dissatisfaction, depression, binge eating, and poor self-evaluation.¹⁹ Finally, although we identified the visits in which physicians discussed weight-related topics, we did not code for any conversations that were specifically about disordered eating behaviors. Despite these limitations, our current findings should offer reassurance to physicians who provide care to overweight and obese adolescents that their conversations about weight are unlikely to provoke extreme weight loss behaviors. Overweight and obese adolescents deserve to receive consistent and caring messages about developing healthy weight strategies, and physician counseling is an important component which, when provided in a patient-centered manner, is not associated with the “creation” of eating disorders.

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Table 1.

Adolescent Characteristics.

	Baseline (n = 535), % (n)	3-Month Follow-up (n = 474), % (n)
Female	57.0 (305)	57.0 (272)
White	37.2 (198)	37.7 (178)
African American	51.5 (274)	50.6 (239)
Age, y, mean (SD)	14.6 (2.0)	14.6 (2.0)

Table 2.How Concerned Are You About the Size or Shape of Your Body?^a

Baseline, % (n)	
1. Not very	18 (94)
2.	20 (108)
3.	36 (190)
4.	15 (83)
5. Very	11 (59)
Total	100 (534)

^aOne participant did not answer.

Table 3.

Prevalence of Nonextreme Weight Loss Behaviors.

	Baseline, % (n)	3-Month Follow-up, % (n)	P
Trying to lose weight	80.0 (427)	75.6 (356)	.04
Exercising to lose weight	92.7 (496)	85.8 (406)	<.001
Eaten fewer calories to lose weight	71.0 (379)	57.5 (268)	<.001

Table 4.

Prevalence of Extreme Weight Loss Behaviors.

	Baseline, % (n)	3-Month Follow-up, % (n)	P
Fasting	7.7 (41)	6.3 (30)	.45
Diet pill use	4.1 (22)	1.7 (8)	.003
Laxative use or vomiting	2.6 (14)	1.0 (5)	.02