

Contradictions and Confounds in Coverage of Obesity: Psychology Journals, Textbooks, and the Media

Esther D. Rothblum*

University of Vermont

Although obesity is not listed as a psychiatric condition in the Diagnostic and Statistical Manual of Mental Disorders, psychologists focus on obesity in their research, clinical practice, and teaching. This article reviews the methods and outcomes of the weight loss research in psychology journal articles, and discusses some of the confounds. These studies focus on comparisons among treatment conditions rather than on the low amounts of weight lost, and do not use clinical criteria for evaluating outcome. Although improvement in physical health is viewed as the reason for weight loss programs, few studies assess physical health. There has been little concern about how weight loss participants feel when they regain weight. Furthermore, the journal peer review process does not encourage paradigm shifts. The article also discusses how the results of the weight loss research studies are covered in undergraduate psychology textbooks and how they are (mis)interpreted by the media. Recommendations for a paradigm shift in the peer review process, coverage in textbooks and the media, are offered.

Obesity is not included in the current (fourth) edition of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994). Yet clinical psychologists have a major role in perpetuating errors and inconsistencies related to body weight. As practitioners, they see clients who come to therapy for weight loss (and eating disorders). As clinical researchers, they study dieting and factors that contribute to weight loss. As educators in clinical psychology training programs (and related courses in undergraduate psychology programs),

*Correspondence concerning this article should be addressed to Esther Rothblum, Department of Psychology, John Dewey Hall, University of Vermont, Burlington, VT 05405 [e-mail: esther.rothblum@uvm.edu].

they include the topic of obesity, and textbooks reflect this coverage. And the general media interview clinical psychologists when "breakthroughs" happen in this field, such as the recent news about identifying the obesity gene in laboratory animals.

This article will focus on three sources for an examination of how obesity is covered by clinical psychology: clinical psychology journals, undergraduate psychology textbooks, and media citation of psychologists. In short, it will describe how clinical psychologists' roles in research, teaching, and media, respectively, often perpetuate misinformation about weight and dieting.

Psychology Journals

There have been a large number of research studies on the psychological treatment of weight loss. The research design of these studies almost universally consists of randomly assigning people to one of several treatment conditions or to a control group, and then assessing weight loss after treatment and follow-up. The focus of these studies is on which of the various treatment groups (e.g., low-calorie diet vs. exercise vs. low-calorie diet plus exercise vs. a waiting list control group) has lost the most weight after treatment. The studies then usually ask participants to return for a "weigh-in" at a specified posttreatment follow-up period, often 6, 12, or—more rarely—18 months after treatment has ended.

Over the past decades there have been a number of reviews of the effectiveness of weight loss programs. Brownell (1982) reviewed more than 100 studies on the treatment of obesity, and found a mean weight loss of 11 lb during treatment. A year later, weight loss participants had gained about 1 lb of this lost weight back. Few weight loss studies follow participants for more than 1 year after treatment ends, but of those that do find that nearly everyone regains weight. Allon (1982) reported that only 1–2% of dieters keep off the weight 5 years after treatment. Similar low rates have been reported by weight loss treatment reviews conducted by Foreyt, Goodrick and Grotto (1981), Leon (1976), Stunkard and McLaren-Hume (1959), and Wooley and Wooley (1979). As early as 1958, Stunkard stated: "Most obese persons will not stay in treatment of obesity. Of those who stay in treatment most will not lose weight and of those who do lose weight, most will regain it" (p. 79).

In our recent review (Cogan & Rothblum, 1993) of 50 studies based on a stratified random sample of weight loss studies conducted in the 1980s, we found that the typical participant was 48% above her insurance table weight before treatment, lost on average 12.8 lb during a 13-week treatment regimen and then regained 4.3 lb by the next follow-up period. In studies published by the end of the 1980s, treatment was getting longer (resulting in more weight loss) but follow-up assessment periods were also getting longer (resulting in more weight regained).

For the rosier picture, we selected only the most successful treatment condition in each study (even though participants had only a random chance of being assigned to this condition). Of these most successful conditions, the average participant weighed 189.4 lb before treatment and 176.8 lb after treatment. We also chose the most successful follow-up conditions (which could be totally different conditions from those that were most successful at posttreatment). Mean change from posttreatment to follow-up of these most successful conditions was 15.9 lb lost. When we included only the longest follow-up periods, mean weight change was 0.4 lb gained.

Most weight loss studies have considerable attrition, as participants drop out of treatment, particularly if they are in the waiting list control group, don't like the particular treatment condition to which they are randomly assigned, or are not losing weight. This means that the posttreatment and follow-up data are based on those participants who stuck with it, who were willing to attend the treatment sessions regularly and engage in the activities associated with the treatment, and who were able to lose weight. In the aforementioned review of 50 weight loss studies (Cogan & Rothblum, 1993), 11 of the 50 studies reported on the number of participants in each treatment condition at all three assessment periods (pretreatment, posttreatment, and follow-up). In these 11 studies, 19% of participants dropped out between pretreatment and posttreatment and 27% dropped out from pretreatment to follow-up (these percentages do not include control groups, in which attrition is often higher).

Other reviews of the weight loss literature have found similarly alarming attrition rates. Volkmar, Stunkard, Woolston, and Bailey (1981) found that 50% of weight loss participants dropped out of treatment in the first 6 weeks and 70% by 12 weeks. In a study by Klem and Klesges (1988), 17–65% of participants (depending on which treatment group they were in) dropped out during treatment and an additional 22–75% dropped out during the follow-up period. Harris, Sutton, Kaufman, and Carmichael (1980) established an intensive treatment program for adolescent girls in which an educator, psychologist, physician, and nutritionist contacted the girls for 1 year. The girls lost little weight, and 53% dropped out of treatment.

These studies indicate that weight loss studies are not resulting in much weight loss, and that this weight loss is not maintained over time. Furthermore, the current methodology in the weight loss treatment outcome literature has a number of confounds that are, surprisingly, never mentioned in the literature. These will be discussed here.

Focus on Specific Treatment Conditions Rather Than Poor Outcome

First, the methodology of comparing distinct treatment conditions via analyses of variance ignores the data that none of these conditions results in much weight loss. In the 50 studies that Jeanine Cogan and I (1993) reported on, 44 found

statistically significant differences between treatment conditions. This may obscure the fact that the actual weight lost in most studies was rather small.

Wing and Jeffery (1984) advocated larger numbers of participants in behavioral weight loss treatment groups for the very reason that the small weights lost (e.g., 5, 10, or 15 lb) require more subjects to become statistically significant! This is an example of improving the research methodology (in this case, the size of the sample) while ignoring the clinical importance (lack of treatment effectiveness).

Lack of Focus on Change From Clinical to Nonclinical Levels of Obesity

The second confound is that a clinical definition of obesity is presented in selecting treatment participants that is not adhered to when discussing treatment effectiveness. There is no focus on whether treatment participants move from clinical to nonclinical levels of obesity during treatment or follow-up. This is despite the fact that most weight loss researchers agree on the clinical definition of obesity, as a body mass index of greater than 25 for overweight and greater than 30 for obesity. In many studies, participants are excluded if they are not clinically obese. Yet the results are presented in terms of pounds or kilos lost per treatment condition, with the condition resulting in the most weight loss considered the most "successful."

It would be simple enough for published studies to provide actual weights of participants, percentage overweight (or body mass index), and the number of participants who have moved from clinical to nonclinical levels of obesity. In our study that reported on outcomes of weight loss articles (Cogan & Rothblum, 1993), 12 studies out of 50 did not report pretreatment, posttreatment and follow-up weights (i.e., they provided no actual weights at all). Ten studies provided only mean weight lost from pretreatment to posttreatment. Regarding percentage overweight (which would allow the reader to calculate number of participants who remain at clinical levels of weight at various points), 30 studies out of 50 gave percentage overweight at pretreatment, but only 9 studies provided this information at posttreatment and only 6 at follow-up.

Other research areas in clinical psychology *do* routinely publish the number of participants who went from clinical to nonclinical levels. For example, the smoking literature consistently reports the percentage of smokers in each treatment condition who went from smoking (clinical level) to quitting smoking (nonclinical level), rather than reporting the mean number of cigarettes smoked in each condition at each assessment period. The research on depression presents the *DSM-IV* (1994) criteria for depression and then indicates the percentage of participants who no longer meet these criteria (nonclinical) after treatment. Not all clinical research areas have clear cutoff points for what constitutes clinical versus nonclinical levels, but obesity is one area that *does* have a cutoff point—and one that is simple to measure.

Perhaps the reason that areas such as cigarette smoking and depression treatment programs report clinical and nonclinical cutoff points is that their programs are often quite successful; the same could not be said of the weight loss treatment literature if outcomes were reported in this manner. In our study of the effectiveness of weight loss studies (Cogan & Rothblum, 1993), only one study reported how many participants had gone from clinical to nonclinical levels of obesity. In this study, 15 out of 16 participants were clinically obese at pretreatment, 10 out of 16 were clinically obese at posttreatment, and at the follow-up 15 of the 16 participants were once again at clinical levels of obesity.

Furthermore, research has shown that weight loss participants have even higher goals than achieving nonclinical body mass indices. Foster, Wadden, Vogt, and Brewer (1997) asked weight loss participants to indicate their "dream weight," "happy weight," "acceptable weight," and "disappointed weight." After 48 weeks of treatment resulting in a 35 lb weight loss, 47% of participants did not even lose enough weight to reach their "disappointed weight."

Lack of Focus on Physical Health Correlates

Obesity is usually presented as a condition that correlates with, or leads to, physical health problems, and this fact is cited in many of the weight loss treatment studies as the reason for attempting to lower body weight. Yet ironically, these same studies often (but not always) exclude participants with physical health problems. This prevents examination of the physical health changes (if any) that correspond to weight loss. The fact that participants are young adult women means that health risks are not likely to be present until these participants are much older. Most treatment outcome studies do not have the ability to conduct long-range longitudinal data collection, in order to follow participants until they age and have health problems. Nor do studies focus on high-risk participants (such as older men or people who already have physical health problems) to assess whether weight loss improves health.

The correlation between obesity and health problems has been critiqued (see Ernsberger, this issue). In addition, it is important to point out that this association is based on studies of obese and nonobese people, not on obese and formerly obese people. In other words, the fact that thin people are healthier than fat people does not mean that formerly fat people (successful dieters) necessarily will also be healthier than fat people who haven't dieted or who can't lose weight. For example, obesity and physical health risks may both be due to genetics, or to a third variable, so that changing one of these factors (weight) may not change the other (health). This is why weight loss research needs to assess physical health measures and also to focus on people who are at risk for these health problems.

Lack of Focus of Psychological Repercussions of Failure to Lose Weight

There has been little, if any, concern about how participants in weight loss programs feel about the fact that they often regain most of the lost weight. In the examination of the published weight loss literature (Cogan & Rothblum, 1993), the average participant was a woman who weighed 48% above ideal weight before treatment, lost 12.8 lb during the treatment program, and then regained 4.3 lb in the next 6.5 months. If we assume a pretreatment weight of about 180 lb, this means the participant weighed 167 lb after treatment and 172 lb at follow-up. Furthermore, these are means, so some participants will lose weight whereas others will gain weight, even during treatment. How is this explained to participants? How do participants explain this failure to themselves?

Berman (1975) examined why people began and terminated diets. Half the participants in this study reported that they ended diets because of weight regain; this was especially true of the most obese dieters. Participants also reported ending diets because of undeserved gain (34%), ridicule (28%), and undeserved loss (32%). This last factor indicates that, even when people are losing weight, they are not always attributing this loss to their own efforts.

To corroborate these self-reports of weight loss participants, Brownell and Stunkard (1978) showed that weight loss and gain is often undeserved—that is, that people who lose weight are not necessarily the ones who are complying with the weight loss program. Dubbert and Wilson (1983) found that people who stayed in weight loss programs lost about the same amount of weight as those who dropped out.

Recently, Marika Tiggemann and I (1997) examined how attributions about weight affect people's self-esteem. Women who were underweight or of average weight had a positive correlation between weight locus of control (beliefs that weight is under one's control) and self-esteem. Women who were overweight, not surprisingly, had a negative correlation between weight locus of control and self-esteem. Furthermore, women with an internal weight locus of control also stereotyped fat women and men more negatively. For men, there was no significant correlation between weight locus of control and self-esteem or stereotyping of others. Thus thin women who believe that weight is under their own control feel fine whereas fat women don't. Presumably, weight loss treatment programs inform participants that weight is under people's control (otherwise why would they attempt to change weight) and this may have detrimental psychological effects on obese participants. In fact, an internal locus of control has been associated with more weight loss (Goldney & Cameron, 1981), so therapists and weight loss researchers may actively encourage internal attributions without regard to psychological consequences.

The Peer-Review Process and Paradigm Shifts

It is apparent to me as a journal editor, as well as in conversations with editors of other psychology journals, that the research that gets positive evaluations by reviewers and editorial board members is that which follows the status quo. Editors, associate editors, editorial board members, and guest reviewers are people known in a particular field, and are likely to favor research that has the same content, methodology, subject samples, and even results as their own (see Gilliland & Beckstein, 1996; Sussman, 1994). This is a controversial statement to make, as psychologists (including myself!) believe that we are unbiased, open to new ideas, and able to review research objectively. Yet most researchers can remember times when their new work was met with disbelief because it failed to conform to prior, published research in some important way. Rotton, Foos, Van Meek, and Levitt (1995) surveyed 740 authors of empirical articles that had been published in 75 journals, and received responses from more than 60% of those surveyed. Among reasons that authors in this study gave for deciding against publishing their research were "inexplicable results" and "unfavorable reviews."

Editors too can think of many instances when what gets published is a slightly new version of an old idea, whereas work that is markedly different gets panned by reviewers. When famous researchers talk about the difficulty in getting their new ideas published years ago, ideas that seem mainstream to us now, we can't imagine how reviewers or publishers could have been so closed-minded. Yet at the same time we, as reviewers, may turn down journal articles or book proposals that present novel or radical ideas (see, for example, Matlin, 1996, about the myth of scientific "objectivity").

When the results and conclusions of a study seem more intuitive to us and conform to what else is known and believed to be true, that study will have an easier time getting published. When a study contradicts our beliefs or those held to be true in the profession, we may submit it to extra scrutiny. The social psychological phenomenon of "confirmation bias" has demonstrated that people tend to seek information that confirms beliefs that they already hold (see Dunbar, 1997; Silverman, 1993, for reviews). Even experts become so entrenched in their perspective that it becomes hard for them to see other points of view.

Recommendations for a Paradigm Shift

Until 1973, it was common to publish research on "homosexuality" that classified homosexuality as a mental illness or that attempted to demonstrate that homosexuals could be "reoriented" to become heterosexual. When members of the American Psychiatric Association voted to remove homosexuality as a mental illness, this was based in large part on the lobbying of gay rights activists from

within and outside the association. These activists pointed to the fact that research was not showing reorientation therapy to be effective and also that research on mental health was showing that lesbians and gay men were not more mentally ill than matched heterosexual samples. Since 1973, research on sexual orientation has used a more affirmative approach.

How can psychology take the lead in effecting a paradigm shift about the research on weight loss? How many published studies will it take before scientists take a stand that it has convincingly been demonstrated that most people don't lose much weight and then regain some of this weight when treatment ends? I would urge the profession of psychology to adopt standards around the weight loss research area, including:

1. *Advocating for a more accurate informed consent process*, since the research shows that long-term permanent weight loss is unlikely (Cogan & Rothblum, 1993; Garner & Wooley, 1992), dieters tend to blame themselves when they do not lose their desired weight (Goodrick, Raynaud, Scott, Pace, & Foreyt, 1992) and weight loss from pretreatment to posttreatment is likely to be minimal and disappointing (Foster et al., 1997) and not meet the expectations of the dieter (Goodrick et al., 1992). This informed consent would consist of notifying all participants in weight loss treatment studies that they are taking part in an experimental procedure of doubtful success (similar to the ways in which patients are informed of the risks involved in taking an experimental drug), and that should they lose little or no weight, this is the fault of our current lack of knowledge about weight loss, not a failure or lack of willpower on the part of the participants. Researchers should include a detailed "debriefing" period for participants, similar to that used in social psychology experiments that involve manipulation, decept, embarrassment, or otherwise have a potentially traumatic impact on participants. This would ensure that participants are not harmed by participating in an ineffective weight loss treatment program in which they were led to believe that behavior change would occur when none did.
2. *Setting standards about what constitutes an effective weight loss treatment*, in terms of what are "clinical" versus "nonclinical" levels of obesity, and reporting the number of participants that achieve this goal (if any) in published weight loss studies. Journal editors may want to set more rigorous publication criteria when publishing weight loss studies that do not have a stated minimum percentage of successful results, other than as "brief reports" or in an afterword about "treatment failures."
3. *When studies compare various treatment conditions, indicating which treatment conditions (if any) actually resulted in clinical (rather than just statistical) effects*. Statistically significant effects may not be large enough for medical or clinical significance. Researchers should not include treatment

conditions that have demonstrated over and over again in the published literature that they do not result in much weight loss.

4. *Limiting treatment to those who are in high-risk categories (e.g., older men) or those who already have health problems that are associated with obesity*. There is little research on whether weight loss results in improved health, and even less on whether regaining weight during the follow-up period reduces these health benefits (see Ernsberger, this issue). It is possible that people who diet and then regain some or all of the lost weight could be in worse physical health than people who stayed at the same (high) weight all along. Even if losing weight is associated with health benefits, it is important to point out to participants (and educated health professionals) that few people can lose weight and keep it off.
5. *Changing the journal peer review process to give preference to studies that challenge existing ideas and that encourage a paradigm shift*. This is not a trivial issue, and yet is one that editors can effect simply by changing the instructions on manuscript evaluation forms.

Undergraduate Psychology Textbooks

There are more than two dozen abnormal psychology textbooks published by major, respectable publishing companies. These texts rely heavily on published research studies in their coverage of mental health disorders, and organize chapters according to the *DSM-IV* (1994). "Obesity" is usually included in these textbooks, either in the chapter on eating disorders or in connection with stress-related disorders.

Even though obesity is not included in the *DSM-IV* (1994), it is possible to conceive of ways that this topic could be covered in abnormal psychology textbooks. When presenting information on eating disorders, a textbook author could review the extensive literature on the stigma of weight, particularly for women in Western nations (see Rothblum, 1992, for a review), and thus on why so many people diet. Coverage of obesity as a health- or stress-related problem would include discussions regarding weight loss as temporary (see Miller, this issue), the negative effects of dieting (see Berg, this issue; McFarlane, Polivy & McCabe, this issue), and research that indicates that the physical health effects of obesity are mixed (see Ernsberger, this issue).

For the purposes of this review, I examined 20 current undergraduate abnormal psychology textbooks by mainstream publishers (e.g., Allyn and Bacon, Brooks Cole, Freeman, Harcourt Brace, Harper Collins, Houghton Mifflin, McGraw-Hill, Norton, Prentice-Hall, and Wiley). Some of these publishers put out more than one standard textbook, and some have long and short versions of textbooks. All are updated whenever the *DSM* changes editions, so they are all quite recent. There is

relatively little (if any) critique of the lack of significant or permanent weight loss in any of the textbooks I examined.

For example, *Abnormal Psychology in a Changing World* (3rd ed.) by Nevid, Rathus, and Greene (1997) contains over seven pages about obesity in the chapter on "Stress, Psychological Factors, and Health." Half the content of this section is on dieting, including a full-page table entitled "Behavioral Techniques of Modifying the ABCs of Eating to Foster Weight Loss." The abnormal psychology text by Nietzel, Speltz, McCauley, and Bernstein (1998) includes obesity in a section entitled "unhealthy behaviors" in the chapter on psychological factors and health. Given the increased recognition of genetic and biological factors in the etiology of obesity and the mixed findings of research on obesity and health (see Ernsberger, this issue), obesity is not quite as relevant as the other health problems (AIDS, cardiovascular disorders, and cancer) included in this chapter.

Carson, Butcher, and Mineka's (1998) text has a four-page section entitled "Hyperobesity" that is part of the chapter on addictive disorders. In the introduction to this section, they state: "People can develop 'addictions' to certain activities that can be just as life-threatening as severe alcoholism and just as damaging, psychologically and socially, as drug abuse. We include two such disorders in this chapter—hyperobesity and pathological gambling" (p. 389). They have subheadings for "Causes of Persistent Overeating" and "Treatment of Hyperobesity." Even though they define hyperobesity as 100 or more pounds overweight, the studies they cite are not limited to these high weights. The section on treatment of hyperobesity concludes: "The treatment of extremely obese patients is often a difficult and frustrating task for all concerned. Even with the most effective treatment procedures, failures abound, partly due to the necessity of self-motivation in treatment" (p. 392). This section includes a number of assumptions: that obesity is an addiction, that it is as life-threatening as alcoholism, and that failures in weight loss are due to the lack of motivation of the obese. Alcohol abuse, drug abuse, and pathological gambling are defined in the *DSM-IV* (1994) as having consequences that affect other people; this is not the case for obesity. Dieters, including obese dieters, are highly motivated to lose weight and stay in weight loss treatment programs even when weight is minimal or nonexistent (see Rothblum, 1990, for a review).

The text by Peterson (1996) includes a section on obesity in the chapter on disorders of childhood and adolescence. Peterson states: "The physical health consequences of obesity are well documented and need little elaboration" (p. 432)—not quite an accurate statement for this controversial area (see Ernsberger, this issue). The author includes a section on treatment with the comments: "There is no shortage of treatment for this disorder, from biomedical to psychological. . . . People cannot maintain weight loss if they go back to the style of life that led them to gain weight in the first place. This sounds commonsensical, but it is obviously a message that the general public does not want to hear. . . . The only way to keep

weight off once it has been lost is to literally change one's lifestyle, eating less and/or exercising more for the rest of one's days. . . . This conclusion follows from studies of interventions that work in the long run, strategies that teach people to approach eating in a self-consciously moderate way" (p. 435). By stating that "there is no shortage of treatment for this disorder" and also by stating that this is "commonsensical," the author gives the misleading impression that weight loss treatments are effective.

Furthermore, the author is implying that the obese are to blame for their weight when he states that "[p]eople cannot maintain weight loss if they go back to the style of life that led them to gain weight in the first place." The idea that the obese are held responsible for their weight is not a new one. In 1979, Wooley and Wooley stated (p. 69): "Excess body fat is probably the most stigmatized physical feature, except skin color, but unlike skin color is thought to be under voluntary control." Research by Maddox, Back, and Liederman (1968) found that only 2% of people thought that blind people were responsible for lack of sight, but more than 70% thought that obese men and women were responsible for their weight. Also, DeJong (1980) found that high school girls rated a case description of an obese peer as self-indulgent and lazy when no reason was given for her weight; however, when the case was described as having a thyroid condition or as having recently lost weight, these negative stereotypes lessened.

The relative (or complete) lack of coverage in these textbooks of research showing that diets don't work is alarming considering how many undergraduates are concerned about their weight, feel fat even if they are average weight, and have eating disorders.

Some textbooks, however, should be praised for covering obesity in a way that is in accordance with available research. Ronald Comer's (1996) text *Fundamentals of Abnormal Psychology* has a two-page box entitled "Obesity: To Lose or Not to Lose" that focuses on the societal stigma of weight, the role of biology and environment, the fact that obesity does not necessarily result in health risks, the lack of effectiveness of diets, and the idea that weight should be left alone. Similarly, the text by Alloy, Acocella, and Bootzin (1996) portrays obesity as socially defined, critiques diets as causing weight gain, and advocates a broader definition of physical attractiveness.

Recommendations for a Paradigm Shift

The coverage of weight and dieting in abnormal psychology textbooks is particularly surprising because obesity has not been included in any of the editions of the *DSM*. Thus, one solution for textbooks is not to cover this topic at all. When "homosexuality" was removed as a mental illness from the *DSM-II* in 1973, abnormal psychology textbooks gradually began to eliminate coverage of this topic, so that it is rarely found in contemporary abnormal psychology texts.

Textbook authors need to keep in mind that their readers are predominantly female undergraduates—the majority of psychology majors and related majors (nursing, social work, and education) are female. These students are likely to be extremely concerned about their own weight and may feel fat even if of average weight or below (see Rothblum, 1990, for a review of this literature). An overemphasis on the health risks of obesity is likely to be counterproductive and result in weight preoccupation, extreme dieting, and eating disorders (see reviews by Berg and McFarlane, Polivy, & McCahe in this issue).

No textbook author is an expert on every topic area, and so many references I found were to review articles rather than original research. Just as the *Women and Depression Task Force Report* compiled by the American Psychological Association (McGrath, Keita, Strickland, & Russo, 1990) has been extensively quoted by textbooks, so a comparable document summarizing the weight loss literature would be useful in this regard. The composition of such a panel might include a majority of psychologists who are *not* providing weight loss services and experts in eating disorders, multicultural issues, and women's studies.

Media Citations

Finally, the media interpret research studies about weight and dieting, often by interviewing or citing the work of psychologists. Because the role of the media is covered separately (see Thompson and Heinberg, this issue), I will focus briefly only on some examples of how the media portray psychological research.

A major contradiction in the media is to report on a research study that indicates diets don't work, obesity is genetic, or related factors, and then to imply (usually in the last paragraph) that all that is needed is a stricter diet, better self-control, or other variables that blame the individual for the weight. In other words, the body of the article is indicating that weight is not under personal control, whereas the ending advocates personal weight loss.

For example, an article in *The Tennessean* (Brody, 1993) entitled "Some Are Destined to Regain It All" reports on the fact that diets don't work. Embedded in this article is a box labeled "It's OK to Overeat Sometimes" in which a clinical psychologist is quoted as saying: "Maybe the message has to be that you can lose weight even if you're not perfect. It's OK to overeat now and then. . . . When after losing weight the dieter's problems remain—for example, the man does not find a girlfriend or the woman a new job, the person may say 'what's the use' and go back to unrestrained eating" (p. 6-F). The message in this box—that one can lose weight and that dieters go back to overeating because of their "problems"—totally negates the message of the main article, which is that diets don't work.

Along similar lines, *The Washington Post* (Squires, 1994) reported on the "obesity gene," confirming that obesity is genetic. Yet a box in this cover story is entitled "Setting a Goal for Weight Loss Gets Harder With Age" and focuses on the

weight loss progress of one man who wanted to lose weight in time for his 50th birthday!

Recommendations for a Paradigm Shift

There are multiple ways that psychologists should respond to media content in order not to perpetuate erroneous or speculative material. It is important that psychologists respond to inaccurate or misleading quotes of this nature, either via letters to the editor, opinion pieces, or direct contact with media leaders. The APA has played a leading role in the interplay between psychologists and the media, and psychologists who are knowledgeable about stigmatization of the obese should become part of the APA media expert resource guide.

Why the Resistance to a Paradigm Shift in the Face of Research Data, and What Can Be Done About It?

Why are hundreds of research studies, using the same methodology, accepted for publication year after year that show little weight loss? How can psychologists putting together a textbook cover the lack of effectiveness of diets and then encourage undergraduate student readers to aim for "reasonable" weight loss? How can the media continue to advocate dieting in the same article that asserts that diets don't work or that weight is genetic?

These questions get at the intimate relationship between research and politics. Regardless of the training psychologists receive that research is "objective," the content area, hypotheses, subject selection, data analyses, and interpretation of results are all affected by sociocultural beliefs (Matlin, 1996). When homosexuality was considered to be a mental illness, the research focused on reorientation "treatment" outcome studies. The fact that this treatment was not effective did not change the basic methodology at the time. It took a paradigm shift—in the case of homosexuality, a vote of the membership of the American Psychiatric Association—to profoundly change the direction of research.

I have discussed earlier (see Rothblum, 1992, 1994) the huge economic markets that depend on women needing to lose weight, feeling dissatisfied with their bodies, and buying diet foods, cookbooks, and exercise equipment. Billions of dollars are at stake, and many companies would lose revenue or go bankrupt if women became satisfied with their bodies to the point of not joining health clubs, not undergoing plastic surgery, or wearing comfortable clothing that was unrelated to the annual changing fashion dictates.

If psychologists should truly endorse a "paradigm shift" around attitudes towards dieting, even to a slight degree, I predict a rapid and vicious backlash on the part of the corporate sector and related institutions, such as the media and the medical establishment. Our profession needs to predict this backlash (consider, for

example, the backlash from cigarette companies when the medical establishment attempts to limit cigarette consumption by adolescents or in public areas) and come up with preventive measures. Failure to do so will only perpetuate unhappiness and mental health problems among North American and European women and girls, and, increasingly, men and boys as well as people in as yet untapped markets in Africa, Asia, and Latin America.

References

- Allon, N. (1982). The stigma of overweight in everyday life. In B. B. Wolman (Ed.), *Psychological aspects of obesity*. (pp. 83–102) New York: Van Nostrand Reinhold.
- Alloy, L. B., Acocella, J., & Bootzin, R. R. (1996). *Abnormal psychology: Current perspectives* (7th ed.). New York: McGraw-Hill.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Berman, E. M. (1975). Factors influencing motivations in dieting. *Journal of Nutritional Education*, 7, 155–159.
- Brody, J. E. (1993, January 10). Some are destined to regain it all. *The Tennessean*, p. 6-F.
- Brownell, K. D. (1982). Obesity: Understanding and treating a serious, prevalent, and refractory disorder. *Journal of Consulting and Clinical Psychology*, 50, 820–840.
- Brownell, K. D., & Stunkard, A. J. (1978). Behavior therapy and behavior change: Uncertainties in programs for weight control. *Behavior Research and Therapy*, 16, 301.
- Carson, R. C., Butcher, J. N., & Mineka, S. (1998). *Abnormal psychology in modern life* (10th ed.) New York: Addison Wesley.
- Cogan, J. C., & Rothblum, E. D. (1993). Outcomes of weight-loss programs. *Genetic, Social, and General Psychology Monographs*, 118, 385–415.
- Comer, R. J. (1996). *Fundamentals of abnormal psychology*. New York: W. H. Freeman and Company.
- DeJong, W. (1980). The stigma of obesity: The consequences of naive assumptions concerning the causes of physical deviance. *Journal of Health and Social Behavior*, 21, 75–87.
- Dubbert, P. M., & Wilson, G. T. (1983). Failures in behavior therapy for obesity: Causes, correlates, and consequences. In E. B. Foa & P. M. G. Emmelkamp (Eds.), *Failures in behavior therapy* (pp. 263–288). New York: Wiley.
- Duubar, K. (1997). How scientists think: On-line creativity and conceptual change in science. In T. B. Ward & S. M. Smith (Eds.), *Creative thought: An investigation of conceptual structures and processes* (pp. 461–493). Washington, DC: American Psychological Association.
- Foreyt, J. P., Goodrick, G. K., & Grotto, A. M. (1981). Limitations of behavioral treatments of obesity: Review and analysis. *Journal of Behavioral Medicine*, 4, 159–173.
- Foster, G. D., Wadden, T. A., Vogt, R. A., & Brewer, G. (1997). What is a reasonable weight loss? Patients' expectations and evaluations of obesity treatment outcomes. *Journal of Consulting and Clinical Psychology*, 65, 79–85.
- Garner, D. M., & Wooley, S. C. (1992). Confronting the failure of behavioral and dietary treatments for obesity. *Clinical Psychology Review*, 11, 729–780.
- Gilliland, S. W., & Beckstein, B. A. (1996). Procedural and distributive justice in the editorial review process. *Personnel Psychology*, 49, 669–691.
- Goldney, R. D., & Cameron, E. (1981). Locus of control as a predictor of attendance and success in the management of obesity. *International Journal of Obesity*, 5, 39–43.
- Goodrick, G. K., Raynaud, A. S., Pace, P. W., & Foreyt, J. P. (1992). Outcome attribution in a very low calorie diet program. *International Journal of Eating Disorders*, 12, 117–120.
- Harris, M. B., Sutton, M., Kaufman, E. M., & Carmichael, C. W. (1980). Correlates of success and retention in a multifaceted, long-term behavior modification program for obese adolescent girls. *Addictive Behaviors*, 5, 25–34.
- Klem, M. L., & Klesges, R. C. (1988). Competition in a minimal-contact weight-loss program. *Journal of Consulting and Clinical Psychology*, 56, 142–144.
- Leon, G. R. (1976). Current directions in the treatment of obesity. *Psychological Bulletin*, 83, 557–558.
- Maddox, G. L., Back, K., & Liederman, V. (1968). Overweight as social deviance and disability. *Journal of Health and Social Behavior*, 9, 287–298.
- Matlin, M. W. (1996). Issues in research on the psychology of women. In M. W. Matlin, *The psychology of women* (3rd ed., pp. 10–17). New York: Harcourt Brace.
- McGrath, E., Keita, G. P., Strickland, B. R., & Russo, N. F. (1990). *Women and depression: Risk factors and treatment issues*. Washington, DC: American Psychological Association.
- Nevid, J. S., Rathus, S. A., & Greene, B. (1997). *Abnormal psychology in a changing world* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.
- Nietzel, M. T., Speltz, M. L., McCauley, E. A., & Bernstein, D. A. (1998). *Abnormal psychology*. Boston: Allyn and Bacon.
- Peterson, C. (1996). *The psychology of abnormality*. Fort Worth, TX: Harcourt Brace.
- Rothblum, E. D. (1990). Women and weight: Fad and fiction. *Journal of Psychology*, 124, 5–24.
- Rothblum, E. D. (1992). The stigma of women's weight: Social and economic realities. *Feminism & Psychology*, 2, 61–73.
- Rothblum, E. D. (1994). I'll die for the revolution but don't ask me not to diet: Feminism and the continuing stigmatization of obesity. In P. Fallon, M. A. Katzman, & S. C. Wooley (Eds.), *Feminist perspectives on eating disorders*. (pp. 53–76) New York: Guilford Press.
- Rotton, J., Foos, P. W., Van Meek, L., & Levitt, M. (1995). Publication practices and the file drawer problem: A survey of published authors. *Journal of Social Behavior and Personality*, 10, 1–13.
- Silverman, B. G. (1993). Modeling and critiquing the confirmation bias in human reasoning. *IEEE Transactions on Systems, Man & Cybernetics*, 22, 972–982.
- Squires, S. (1994, December 6). Setting a goal for weight loss gets harder with age. *The Washington Post*, p. 10.
- Stunkard, A. J. (1958). The results of treatment for obesity. *New York State Journal of Medicine*, 58, 79–87.
- Stunkard, A. J., & McLaren-Hume, M. (1959). The results of treatment for obesity. *Archives of Internal Medicine*, 103, 79–85.
- Sussman, M. B. (1994). The Charydis of publishing in academia. *Marriage and Family Review*, 18, 161–169.
- Tiggemann, M., & Rothblum, E. D. (1997). Gender differences in internal beliefs about weight and negative attitudes towards self and others. *Psychology of Women Quarterly*, 21, 581–593.
- Volkmar, F. R., Stunkard, A. J., Woolston, J., & Bailey, R. A. (1981). High attrition rates in commercial weight reduction program. *Archives of Internal Medicine*, 141, 426–428.
- Wing, R. R., & Jeffery, R. R. (1984). Sample size in clinical outcome research: The case of behavioral weight control. *Behavior Therapy*, 15, 550–556.
- Wooley, S. C., & Wooley, O. W. (1979). Obesity and women. I. A closer look at the facts. *Women's Studies International Quarterly*, 2, 69–79.

ESTHER ROTHBLUM is Professor of Psychology at the University of Vermont, where she was University Scholar during the 1992–1993 academic year. Her research has focused on obesity and employment discrimination; the stigma of body weight in the United States, Australia, and Africa; and social skills related to compensating for weight in the work setting. She has edited 21 books, including *Overcoming Fear of Fat*, and in 1992 received the Distinguished Achievement Award from the National Association to Advance Fat Acceptance.