

The Emerging Challenge of Food Addictions: Retooling Treatment Models to Address the Needs of Obese and Overweight Clients

Steven K. Nielsen and Jeanne D. Booth

A study released this year by the Centers for Disease Control (CDC; 2005) was the subject of considerable controversy when it identified that obesity was rivaling tobacco as the number one cause of preventable death in the United States. In their 1990 study, obesity-related deaths outranked alcohol as the “number two killer.” While the Centers for Disease Control’s current study was criticized by some for alleged faults in computation, the final statistical outcomes verified that health problems related to overeating continue to rise to epidemic proportions. Two primary behaviors were cited in the study as the key causal factors in obesity: underactivity and overeating. The CDC’s recent findings are supported by other studies throughout the U.S. focusing on the eating habits of children and adults. This body of evidence is compelling counselors to abandon the notion that eating behaviors are a reflection of lifestyle preferences and to consider overeating as an addictive behavior.

These findings should have serious implications for counselors seeking to assist overweight and obese clients. For the last two decades, the counseling profession, devoted to diversity and inclusion, worked intensively to combat stereotypes about the larger members of society but, counterproductively, limited the clinical evaluation of this client population. Diagnostic criteria devoted to aberrant eating patterns, such as those outlined in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR*; American Psychiatric Association, 2000), were reserved for cases where binge eating and/or purging were key features of the psychological presentation (p. 594).

Compulsive Eating as an Addictive Behavior

Redefining compulsive eating behaviors as an addiction triggers a paradigm shift that challenges both theory and practice. Equally daunting is the creation of a universally accepted definition of compulsive eating,

as well as the development of corresponding treatment protocols to address the characteristic overeating and underactivity common to the psychological presentation. Traditionalists in the field of addictions treatment adhere to a strict definition of an addiction: one reserved specifically for drugs and alcohol. They argue that the inherent psychoactive properties of the substance result in physiological evidence of tolerance and/or withdrawal that are fundamental to the diagnosis, and that the use of the term *addiction* must be predicated on the presence of these psychological indicators. They resist the recent trend to include compulsive behavioral patterns such as overspending, gambling, and overworking as addictive behaviors.

Advocates for expanding the definition of addictive behavior argue that the key elements outlined in the *DSM-IV-TR* for substance dependence (p. 197) are applicable to the diagnoses of other uncontrollable, compulsive patterns of behavior. They postulate that these criteria can be readily applied to other patterns of excessive, self-destructive behavior, and cite emerging scientific evidence that gratifying, repetitive behaviors can potentially alter the structure of reward circuitry in the brain, thus creating an addicted brain.

The obvious parallels between traditional substance dependence and behavioral addiction are evident in the research conducted at the University of Texas in Austin by Janet Spence and Ann Robbins (1992) who explored the dimensions common to workaholics. Their research identified patterns of behavior that were evident not only in workaholics but were also commonly seen in shopaholics, alcoholics, drug addicts, and others. As frequently found in the diagnosis of individuals struggling with substance dependence, they discovered that workaholics demonstrated a primacy of focus in the pursuit of their repetitive behavioral pattern, mirroring the descriptors in the *DSM-IV-TR* for substance dependence. Mental preoccupation was accompanied by inordinate amounts of time spent engaged in the behavior, which is

addressed in criterion 5. In addition, “important social, occupational, or recreational activities are given up or reduced” in pursuit of the behavioral pattern, meeting criterion 6.

Spence and Robbins also found other workaholic characteristics common to the addictive patterns described in the *DSM-IV-TR* for substance dependence. Their subjects remained immersed in their compulsive patterns, feeling driven or obligated to continue the pattern despite the fact that it no longer held their interest and experienced diminished enjoyment, which correlates with criterion 1b. Workaholics also persisted in their behavioral patterns despite evidence of health risks and health complaints which meets criterion 7. These indicators have a clear correlation to those individuals plagued by overeating behaviors. Additionally, compulsive eaters will readily comment that they maintain “persistent desire or unsuccessful efforts to cut down or control” their food intake, which is evident in *DSM-IV-TR* criterion 4, and that food is “taken in larger amounts or over a longer period than was intended,” which is diagnostic criterion 3.

Ongoing research involving both behavioral theory and the brain itself may offer insights as to why gratifying, repetitive behaviors become so resistant to change. Researchers and theorists are unable to provide a clear and unified understanding as to why individuals engage in behaviors that provide short-term rewards but result in long-term, deleterious consequences. There are, however, several elements of behavioral theory that speak to addictive behavior. Theories of classical and operant conditioning can be applied to a predisposition toward overeating. Skinner (1976) noted that a “behavior followed by a reinforcing stimulus results in an increased probability of that behavior occurring in the future” (p. 77). The motives for overeating, like other indulgent behaviors, may simply be the process of overlearning. The sensorimotor rewards associated with the smells, tastes, and preparation of food, as well as the gustatory rewards of chewing, eating, and the satisfying fullness upon completion of an eating event, undoubtedly contribute to a ritual pursuit and overpursuit of eating behaviors. Similarly, the social reinforcement model (Bandura, 1977) also has application in this proclivity toward eating. Unlike animals, which must compete for food resources, humans use food as a means of social exchange. Awkward introductions are modulated, acquaintances become friendships, and business associations are solidified during a shared meal. Humans, therefore, tend to associate shared eating activities with the development of a sense of social acceptance and community. Thus, the emotional rewards associated with this process may encourage its repetition.

Perhaps the most compelling research to emerge in recent decades comes from the area of brain and gene research. This research, when combined with behavioral theory, may explain why compulsive eating is pursued beyond the point of satiation despite clear evidence that body mass has reached a critical point and health risks are imminent. Geneticists Kenneth Blum and David Comings (1996) proposed that feelings of satisfaction in the appetite system are modulated by various physiological processes. When glucose levels, which are associated with hunger, drop, the limbic system in the brain registers the need for food. The cortex responds by planning and pursuing various food gathering behaviors. When food has been consumed and glucose levels rebound, the limbic system responds with the production of dopamine, a pleasurable neurotransmitter, indicating that satisfaction has been achieved. Blum and Comings postulated that individuals with insatiable appetites for food, sex, alcohol, gambling, and other compulsive behaviors are suffering from a reward deficiency syndrome. They argue that the genetic problem lies in the *D2R2* allele, which prevents dopamine from binding to neurons in the reward pathways. Their research found this deficiency present in 50% to 80% of alcoholics, drug addicts, pathological gamblers, and compulsive eaters.

Blum, Cull, Braverman, and Comings (1996) proposed that, in primitive times, humans derived satisfaction and a sense of meaning from the multiple behaviors associated with the hunting, gathering, preparing, and eating of food. The physiological rewards associated with these multiple processes stimulated the limbic regions of the brain, resulting in a sense of satisfaction. They argued that recent technological shortcuts in food seeking and preparation have drastically reduced the opportunities for stimulation in this region of the brain. In short, food acquisition and preparation have become too easy, and dopamine stimulation in the brain has decreased accordingly. This reduction leaves the consumption phase as the only means to stimulate the pleasure centers of the brain and, thus, reinforces a tendency toward overindulgence during consumption.

Other theorists argue that the problem lies in appetite sensors of the hypothalamus (Carter & Firth, 1999). The lateral nucleus of the hypothalamus sends signals that glucose levels are declining and that hunger is imminent. After food consumption, the ventromedial nucleus of the hypothalamus signals that glucose levels are normal and satiation has been achieved. The hypothalamus constantly relays information about glucose levels to the cortex of the brain, which is the mechanism for decision making regarding the appropriate amount of food consumption. Cranial

computerized tomography (CT) images focusing on the neural activity between the hypothalamus and the cortex demonstrate that these signals are not transmitting effectively in individuals suffering from eating disorders (Rothenberger, Blaz, & Lehmkuhl, 1991). This impaired cerebral functioning compromises one's ability to gauge hunger appropriately, regulate food intake, and recognize satiation.

Dieting Versus Addictions Treatment

The diet industry in the U.S. continuously produces the “new” solutions for those struggling with compulsive eating. Each year numerous books, articles, and testimonials emerge touting the long-term effectiveness of particular weight loss strategies, yet researchers have consistently identified that most weight losses are short term. Not only is the weight regained, but additional weight is gained, triggered by the body's primal tendency to store fat in response to the earlier deprivation (Heatherton, Polivy, & Herman, 1991). Polivy and Herman (2002) proposed that the diet programs capitalize on myths that capture but eventually disappoint followers. The advertising associated with the weight loss industry guarantees short-term results but fails to acknowledge not only the physiological dangers of rapid weight loss, but also the behavioral and psychological demands inherent in a significant change in lifestyle.

When the inherent shortcomings of any diet plan emerge, weight loss programs typically encourage the dieter simply to adhere to the prescriptive elements of the diet. These restrictive procedures fail to take into account the human tendency to avoid inhibitory goals (Cochran & Tesser, 1996) and fail to address the cognitive stress and emotional depletion associated with self-regulation (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Subsequently, when the diet fails, the responsibility for the failure is attributed to the dieter's lack of persistence rather than the deficiencies of the weight-loss program (Polivy & Herman, 2002). This ongoing cycle of unrealistic expectations, the distress of having immediate results followed by increased weight gain, and the reinvestment in new dieting strategies leads to the False Hope Syndrome (Polivy & Herman, 2002) and often results in periods of depression.

Research has suggested that compulsive eating, like addictions to alcohol and drugs, has physiological, genetic, and behavioral origins. Dieting strategies fail to provide counselors with realistic options to address compulsive eating patterns. Mental health practitioners have come to understand that change is an intrinsically gradual and arduous process (Prochaska, 1995);

therefore, it appears that the intervention strategies commonly incorporated into addictions treatment should be used with clients suffering from compulsive overeating. Responsible therapeutic strategies should include motivational interviewing, psychoeducational training, the development of social support systems as well as case management services, behavioral retraining, and the use of adjunctive medications to ease the withdrawal processes and address cooccurring mental disorders.

The need to accommodate compulsive eaters within existing addiction treatment models is evident. Lengthy discourse among professionals focusing on diagnostic criteria will only allow the problem to reach epidemic proportions. Currently, 65% of Americans are classified as overweight and 30% meet the medical standard to be classified as obese (CDC, 2005). If the trend toward compulsive eating is not curtailed, the World Health Organization projects that by 2020 virtually all adults in the U.S. will be overweight. The eventual impact of this development on our existing health care systems will be devastating.

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, 74, 1252–1265.
- Blum, K., Cull, J., Braverman, E., & Comings, D. (1996). The reward deficiency syndrome. *American Scientist*, 84, 132–146.
- Carter, R., & Firth, C. (1999). *Mapping the mind*. Los Angeles: University of California Press.
- Centers for Disease Control. (2005). *Telebriefing transcript overweight and obesity: Clearing the confusion*. Atlanta, GA: Centers for Disease Control Office of Communication. Retrieved August 5, 2005, from <http://www.cdc.gov/od/oc/media/transcripts/t050602.htm>

- Cochran, W., & Tesser, A. (1996). The “what-the-hell effect”: Some effects of goal proximity and goal framing on performance. In L. L. Martin & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self-regulation* (pp. 99–120). Mahwah, NJ: Erlbaum.
- Heatherton, T., Polivy, J., & Herman, C. P. (1991). Restraint, weight loss, and variability of body weight. *Journal of Abnormal Psychology, 100*(1), 78–83.
- Polivy, J., & Hermann, C. P. (2002). If you first don't succeed. False hopes of self-change. *American Psychologist, 57*(9), 677–689.
- Prochaska, J. O. (1995). Common problems: Common solutions. *Clinical Psychology: Science and Practice, 2*, 101–105.
- Rothenberger, A., Blaz, B., & Lehmkuhl, G. (1991). What happens to electrical brain activity when anorectic adolescents gain weight? *European Archives of Psychiatry and Clinical Neuroscience, 240*(3), 144–147.
- Skinner, B. F. (1976). *About behaviorism*. New York: Random House.
- Spence, J. T., & Robbins, A. S. (1992). Workaholism: Definition, measurement, and preliminary results. *Journal of Personality Assessment, 58*, 160–178.