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PREVIEW

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**Psychological factors relating to postoperative outcome to
gastric bypass surgery for morbid obesity**

Vogel, Darrell Scott, Psy.D.

Pace University, 1991

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PREVIEW

**PSYCHOLOGICAL FACTORS RELATING TO
POSTOPERATIVE OUTCOME TO GASTRIC BYPASS SURGERY
FOR MORBID OBESITY**

by

DARRELL S. VOGEL

A DOCTORAL PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF PSYCHOLOGY IN THE
DEPARTMENT OF PSYCHOLOGY AT PACE UNIVERSITY

NEW YORK

1991



PSYCHOLOGY DEPARTMENT
PSY.D. PROJECT
FINAL APPROVAL FORM

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IN THE VOGEL TRADITION -
DEDICATED TO NICOLE KRISTIN VOGEL,
FUTURE SCHOLAR

PREVIEW

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ABSTRACT

This investigation marked the initial phase of a longer-term research study of patients undergoing a gastric bypass for morbid obesity. The purpose was for the enhanced understanding of the problem of morbid obesity and identifying the psychological factors relating to postoperative outcome to gastric surgery.

A sample of 44 consecutive patients of the Obesity Consult Center at Tufts-New England Medical Center, were evaluated preoperatively with 39 patients ultimately having the surgery. The contribution of psychological factors was examined with the Millon Behavioral Health Inventory, (MBHI), and a semistructured interview (SI), specifically designed for the study and for the initial intake interview.

Patients were classified based on characteristic coping styles with the MBHI. Extensive demographic data, weight history, eating behaviors and self reported reasons for overeating, as well as their expectations for amount of weight loss and for life changes via the weight loss were examined with the SI.

The sample was mostly women, demographically mixed, with an average age of 36 years old, and preoperative weight of 306 pounds. Most were employed, with at least a high school education.

The results demonstrated that patients lost an average of 35 percent of their total body weight after two years and attended follow-up appointments for at least one year. Greater percent weight change (all patients lost weight) was related to the following variables: patients who were not expecting "major" changes in their physical activity, patients who described themselves as average weight entering kindergarten, patients who had utilized behavior modification to lose weight in the past, patients who weighed less preoperatively and patients who scored high on the MBHI-5: Confident Style scale.

Greater compliance with follow-up appointments (CFA) was found for those patients scoring high on the following MBHI scales: Cooperative and Respectful. Better CFA was also found for patients who: did not indicate they were having surgery to avoid future medical disability, were expecting improvement in their self-concept, did not indicate boredom was a reason for their overeating and who had previously attempted psychotherapy to lose weight. The relative importance of these findings along with limitations of the study are discussed.

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PREVIEW

Chapter I
Introduction

Obesity is the accepted term for the presence of excessive adipose mass (fat) in relation to other body components. More specific operational or statistical definitions become problematic due to the complexity of the disorder and the scientific discord associated with obesity (Berger, Berchtold, Gries and Zimmerman, 1981). The common approach of screening populations and then applying a weight criteria, based on a weight-for-height index, is flawed due to changing relative body weights. Berger, and colleagues (1981), point out the currently average weight male would be considerable over-weight by 1946 standards.

Moreover, a weight-for-height table does not consider the important ratio between adiposity versus muscular tissue, therefore an extremely muscular athlete may be considered obese based on these tables because of his or her relatively high weight (Keyes, Fidanza, Karonen, et al., 1972). This is why operational definitions involving morbidity, decreased capacity and mortality have been increasingly utilized for defining obesity (Berger, et al., 1981).

Obesity is considered one of the most prevalent health problems in industrialized societies. Despite an apparent reduction in calorie consumption, and an improved societal understanding of nutrition and exercise, the prevalence of obesity has doubled since 1900 (Thompson, Jarvie, Lahey, & Cureton, 1982). This is understood to be primarily the result of an ever increasing sedentary lifestyle for children and adults.

The condition of obesity has been closely scrutinized by both psychologists and physicians. For researchers, obesity can seem an enigmatical problem due to its complex and apparently multidetermined etiology (Brownell, 1982). Despite extensive research, the underlying causes of obesity are not yet fully understood; what is clear is that obesity is caused by a persistent caloric intake that exceeds the energy output needs of the body.

Many variables come into play when discussing the problem of obesity and its causes. These include numerous psychological, social and cultural factors as well as a host of interrelated physiological factors including: genetic, anatomic, endocrine, biochemical and neuroregulatory (Raymond, 1986; Castelnovo-Tedesco, 1987).

The question of precise causation remains elusive despite voluminous research into the etiology

of obesity. Yet, the consequences are understood and well documented, particularly for the "morbidly" obese who are by definition more than twice their ideal body weight for height and sex or at least 100 lbs. overweight (Reinhold, 1985). The most commonly reported complications and associated risks of obesity include: diabetes, hypertension, increased risk of cardiovascular disease, musculoskeletal and metabolic difficulties, significant psychosocial distress and a strong possibility of early death (Van Itallie, 1979).

For practitioners, obesity may appear an intractable disorder as a multitude of treatments have proven ineffective for longterm weight loss (Drenick, 1981). For the obese individual, obesity can seem an enslaving condition given the refractory nature of the disorder (Brownell, 1982). Various treatment approaches have been utilized such as: nutritional guidance and diet planning, protein-sparing liquid diets and other forms of fasting, pharmacological interventions with amphetamine or other anorectic drugs and exercise programs. Psychotherapy and behavior modification have produced mixed results (Brownell & Stunkard, 1978; Coates & Thorenson, 1978; Bray, 1981). Treatment regimens abound, yet it can generally be said that satisfactory interventions continue to

prove elusive and many problems remain (Van Itallie, 1980).

In the case of extreme or morbid obesity, surgical interventions have been increasingly utilized over the past three decades and recent advances appear promising in terms of decreased mortality, improved quality of life and improved eating habits (Quaade, 1981). Long-term weight loss, measured in terms of percent overweight reduction, represents the most relevant value in determining the relative worth of any weight loss intervention. As we will see, the jury is still out regarding the effectiveness of the gastric bypass, although the results certainly are much more promising than conventional weight loss methods (Reinhold, 1982; Mason, Printen & Blommers, 1978; Mahoney & Mahoney, 1976).

There is a large body of literature on the condition of obesity, and a growing number of studies contrasting and comparing various treatments for morbid obesity such as gastric bypass surgical procedures. Few studies have reported on the use of psychological tests and interviews for screening patients to assess their suitability for gastric bypass surgery or to facilitate preoperative and postoperative treatment.

Review of the Literature

The literature review will be divided into the following four sections: (1) a brief exploration into the causes and consequences of obesity; (2) personality characteristics of the morbidly obese; and (3) surgical intervention for morbid obesity; (4) a review of the relatively small number of similar studies that have specifically explored personality correlates relating to outcome of gastric bypass surgery.

Causes and Consequences of Obesity

Clearly, obesity derives from polygenic determinants. Biochemical, endocrinological, neural processes as well as fat cell morphology work in concert with psychological, social and cultural influences, contributing to the condition(s) of obesity (Bray, Dahms, Atkinson, et al. 1980; Castelnuevo-Tedesco, 1987).

The relative contribution of each of these causes differs considerably from one obese person to another and remains an issue of much debate. A more compelling question stems from the increasingly accepted view of obesity as not a singular disorder, but many disorders (Raymond, 1986). Accepting this perspective, another challenge becomes identifying subgroups of the obese based on more individually specified causes.

Along with biological factors, many psychological variables have been suggested as causes of, or antecedents to obesity: mother-infant bonding patterns, overfeeding, underfeeding, or indiscriminate feeding, taste responsiveness and palatability, poor or faulty childhood eating habits, adolescent body image disturbance, external versus internal responsiveness to environmental cues, and cognitive processes such as excessive food thoughts resulting in a hyperarousal to food and eating (Bruch, 1975; Rodin, 1981a; Rodin, Bray, Atkinson, Dahms, Greenway, Hamilton & Molitch, 1976).

Strongly opposing viewpoints have emerged as to the role of psychological factors, specifically personality disturbance, in causing obesity (Bennett and Gurin, 1982). It is a widely accepted fact that there is a genetic basis for obesity, however the extent to which genetic differences cause obesity and upon which processes these genetic differences operate, remains a topic of great controversy.

For example, Hirsh (1979) reported that obese people were born with more fat cells and by late childhood only the size of these cells, not the quantity, fluctuates. He maintains that these cells may be depleted of lipid or shrunken, but because the cells are everpresent they are, in essence, waiting to be refilled. Hence, achieving and maintaining a weight loss is extremely difficult.