

# **SUGGESTIONS FOR THE PRE-SURGICAL PSYCHOLOGICAL ASSESSMENT OF BARIATRIC SURGERY CANDIDATES**

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# **Suggestions for the Pre-Surgical Assessment of Bariatric Surgery Candidates**

## *Introduction*

This document is intended to provide an overview of elements that are important to the pre-surgical assessment. Given the paucity of empirical data in this area, this paper is not intended to serve as training or as a statement of standardization, consensus, or best practice guidelines for conducting this assessment. Instead, our aim is to address the content of a preoperative psychological assessment, the role of psychological testing, and the qualifications of the practitioner who completes these assessments.

## *Objectives of the Assessment*

When a surgeon assesses patients for bariatric surgery, he/she ascertains their general health, with the idea of identifying those for whom surgery is too risky and those who have conditions that need to be treated, stabilized, or managed for surgery to be worth its risk. Behavioral health specialists can no more “predict” a particular psychological outcome than the physician can “predict” a surgical or medical complication. We can, however, via the pre-operative behavioral health assessment, identify psychosocial risk factors and make recommendations to both the client and surgical group that are aimed at facilitating the best possible outcome for the patient.

Patients are typically faced with initial dietary restrictions, permanent changes in eating and dietary habits, altered body sensations and experiences, shifting body image and self care behaviors, new cognitions and feelings, and an emerging and different lifestyle. In addition, they may realize sometimes unexpected and significant changes in relationships that may result in marked stress. Bariatric surgery is a highly effective procedure that not only reconfigures and/or restricts a patient’s stomach, but significantly affects their psyche as well. Generally patients will need a secure identity, sound psychological resources, resiliency, effective coping strategies, and willingness to access meaningful support from others.

When problematic pre-surgery psychosocial factors are identified, the clinician is able to alert the treatment team and the patient, and make appropriate recommendations. Recommendations may include pharmacological interventions, psycho-education, psychotherapy to address potential post surgery stumbling blocks, nutritional consultation, close aftercare monitoring, and/or bariatric surgery support group attendance.

## *Assessment Content*

Common categories of assessment include: behavioral, cognitive/emotional, developmental, current life situation, motivation, and expectations.

## Behavioral

### ❖ Previous Attempts at Weight Management

It is well documented that non-surgical attempts at weight management for patients with morbid obesity have little if any long-term efficacy. Nonetheless, a thorough weight and diet history can provide valuable information regarding the psychological, behavioral, and physiological contributors to the progression of morbid obesity. Patterns of loss and regain provide information regarding eating habits and lifestyle as well as behavioral and emotional factors that have contributed to past successes or failures—and may be relevant post surgery.

### ❖ Eating and Dietary Styles

The assessment of dietary habits and eating styles provide the clinician with vital information that not only points to the client's readiness for surgery but may indicate issues that will either support or interfere with issues of post surgical compliance and adherence. Tracking eating behaviors over time and across situations (e.g., stressful situations or holidays) can offer valuable insights and information regarding these issues. If the candidate demonstrates difficulties in one or more of these areas, we make an effort to identify these areas of vulnerability, help the client predict and prepare for these situations, and propose appropriate interventions.

Assessing how a particular mindset influences eating can also provide important information. For example, it may be useful to track changes in eating and drinking habits *prior* to the time the client made the decision to pursue a bariatric surgical procedure, those habits *at the time* of making the decision to become a surgery candidate, and *after attending* the information (or orientation) seminar for surgery. Documenting the candidate's efforts over time to modify eating behavior and fluid intake and to cultivate a healthy lifestyle can serve to capture the degree to which the candidate understands the basic principles of healthy eating, reveal whether the candidate is motivated to modify behavior, and suggest the extent to which unhealthy eating (and other unhealthy lifestyle habits) is ingrained.

Accurately distinguishing between different types of maladaptive eating behaviors serves many purposes. Primarily it helps delineate maladaptive patterns of eating that are subsequent to dieting and restriction versus those styles of eating that are clearly emotionally driven.

- **Binge eating:** Studies suggest that approximately 30% of individuals presenting for the treatment of obesity engage in binge eating.<sup>1</sup> It is important to distinguish between binge eating that is driven by psychological factors and binge eating that is driven by physiological factors.<sup>2</sup> Keys, et al.<sup>3</sup> uniquely demonstrated that the direct

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<sup>1</sup> Spitzer, R. L., Yanovski, S., Wadden, T.A., Wing, R., Marcus, M.D., Stunkard, A.J., Devlin, M., Mitchell, J., Hasin, D., & Horne, R.L. (1993). Binge-eating disorder: It's further validation in a multisite study. *International Journal of Eating Disorders*, 13, 137-150.

<sup>2</sup> Grilo, C.M., Masheb, R.M. & Wilson, G.T. (2001). Subtyping binge eating disorder. *Journal of Consulting and Clinical Psychology*, 69, 1066-1072.

biological consequences of semi starvation and restricted eating include preoccupation with food, increased pressures to eat, and the likelihood of binge eating. Other types of physiologically driven binge eating may be triggered if eating is initiated in an intense state of hunger (reactive overeating) or if restrained eating is disrupted via disinhibition or counterregulation.

- **Overeating:** Overeating may represent a lack of interoceptive awareness and an inability to discern internal cues such as hunger, appetite, satiety, or fullness. Alternatively, overeating may represent a conscious decision to eat “just because” or eating that is more emotionally driven. Many times early incidences of binge eating convert to discrete periods of overeating that are no longer hallmarked by the indicators of control associated with binge eating.
- **Grazing:** Grazing may stem from habit and mindlessness or may be compulsive or emotional in nature.
- **Night eating syndrome** is defined as skipping breakfast  $\geq 4$  days per week, consuming more than 50% of calories after 7 PM, and difficulty falling asleep or staying asleep  $\geq 4$  days per week.<sup>4</sup> The prevalence of night eating syndrome in pre-surgical bariatric candidates has been reported to be as high as 26%<sup>5</sup> and as high as 27% in a bariatric sample 32 months after surgery.<sup>6</sup>

#### ❖ Physical Activity and Inactivity

Physical activity and fitness are related to improved health and quality of life,<sup>7</sup> while physical inactivity is related to increased risk for cardiovascular disease<sup>8</sup> and has been implicated in the development of obesity. Some candidates report having a moderate activity program in place that is appropriate to their body size, shape, and physical limitations. Others may describe an almost entirely sedentary lifestyle. All candidates should understand the relationship between physical activity and lifelong management of morbid obesity and optimal states of physical and psychological health. Some patients seem more amenable to incorporating body movement into their daily lives when: (a) it is fun, and/or (b) it is done

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<sup>3</sup> Keys, A., Brozek, J., Jenschel, A., Mickelson, O., Taylor, H.I. (1950). *The Biology of Human Starvation*. Minneapolis, Minn: University of Minnesota Press.

<sup>4</sup> Stunkard, A., Berkowitz, R., Wadden, T., et al. (1996). Binge eating disorder and the night eating syndrome. *International Journal of Obesity and Related Metabolic Disorders*, 20, 1-6.

<sup>5</sup> Rand, C.S.W., & Kuldau, J.M. (1993). Morbid obesity: A comparison between a general population and obesity surgery patients. *International Journal of Obesity*, 17, 657-661.

<sup>6</sup> Rand, C.S.W., MacGregor, A.M.C., & Stunkard, A.J. (1997). The night eating syndrome in the general population and among postoperative obesity surgery patients. *International Journal of Eating Disorders*, 5, 75-84.

<sup>7</sup> Paffenbarger, Jr., R.S., Hyde, R.T., Wing, A.L., & Hsieh, C. (1986). Physical activity, all-cause mortality, and longevity of college alumni. *New England Journal of Medicine*, 314: 605-613.

<sup>8</sup> Fletcher, G.F., Blair, S.N., Blumenthal, J., et al. (1992). Benefits and recommendations for physical activity programs for all Americans: A statement for health professionals by the Committee on Exercise and Cardiac Rehabilitation of the Council on Clinical Cardiology, American Heart Association. *Circulation*, 86: 340-344.

for the purpose of disease management (to improve cardiovascular fitness), (c) it is used as a stress releaser, (d) it improves sleep, or (e) it becomes a social outlet, and not engaged in simply for “weight loss” or as an antidote to eating. By operating from this mindset, patients may be more likely to sustain their activity program.

Whether or not a candidate is currently engaging in appropriate activity, it is important to assess his/her plan (if any) to incorporate meaningful exercise post surgery. How reasonable is their plan? What will be necessary for them to maintain physical activity after surgery? Work schedules and family commitments may make it difficult to initiate a consistent plan. Some communities are more exercise-friendly than others and it is important to ascertain what barriers to sustained post surgery exercise the patient’s home environment and neighborhood community may pose.

### ❖ Substance Use

While the assessment of substance use is standard practice for all healthcare practitioners, the evaluator may also wish to explore potential links between the person’s use of a substance and his/her: (a) judgment and self-management behavior, (b) coping style, (c) addiction proneness, (d) compulsive tendencies, and (e) need to self-medicate (e.g., in an effort to manage depression, anxiety, insomnia, and/or pain). Substances to assess include nicotine, alcohol, caffeine, medications, supplements, and illicit substances.

In addition to the reasons a patient may be using supplements, there is the issue of the physical effect of certain substances post surgery. For example, with some bariatric surgeries alcohol is more rapidly absorbed after surgery. Carbonated beverages may negatively affect pouch integrity. Nicotine may slow healing and/or cause ulcers. Certain medications may damage the pouch, etc.

Finally, the recognition and discussion of the risk of cross addiction is particularly relevant to the bariatric patient to the extent that food, eating, and weight are used as methods of self-regulation and self-soothing.

### ❖ Health-Related Risk-Taking Behavior

We find that health-related risk taking behavior in our patient population includes behaviors that are likely to be impulsive, compulsive, or habitual in nature.

*Impulsive behavior* is hasty action with little forethought or regard for consequences. Bariatric surgery candidates with impulse control problems raise concerns for the surgeon about post surgery non-adherence and safety. They may be at higher risk for the resumption of disordered eating, including the consumption of less healthy foods with little caloric value (dumping syndrome is not inevitable). Some patients may ignore initial post surgery dietary restrictions (liquid and pureed food intake) and turn to eating solids way too soon, thus risking pouch-related problems. These and other risk factors must be carefully appraised when impulse control problems are identified via the assessment. Interventions or precautionary measures may need to be considered to increase the probability of an improved post surgery outcome.

**Compulsive behavior** serves to distract an individual from unpleasant or unwanted thoughts or feelings. Depending on the circumstances, any activity can become a compulsive behavior. In our patient population, typical compulsive behaviors include emotional eating, stress eating, and cigarette smoking. We have found that candidates who engage in compulsive behavior are at high risk post surgery for substituting other behaviors at maladaptive and compulsive levels when food is no longer readily available. Some of the maladaptive behaviors that may replace eating include, watching television, computer use (Internet, video games), compulsive exercise, hypersexuality, gambling, alcohol or drug use, and shopping.

Finally, a **habit** is an action that is executed automatically, akin to being on autopilot so to speak. New habit acquisition often requires deliberate thinking. By being mindful, an individual is in the position to think purposefully and to respond effectively to the cues in the environment. The pre-surgical assessment needs to evaluate the role that food has played across the patient's life and the extent with which their food consumption has been and is driven by less than mindful consideration. Candidates who display a persistent and habitual pattern of unregulated eating may need psycho-education or psychotherapy to enhance their appreciation of or skill build their capacity for mindful eating.

**Compliance** with medical treatment and **adherence** to self-management regimens currently and in the past are indicators of the patient's potential attitude toward post-surgical guidelines. Has the patient followed through with treatment recommendations for either a physical or mental health condition? Are they complying with dietary restrictions and taking medications as directed; compliant and timely with physicals and dental exams (and, for women, Pap exam, breast self-exam, and mammogram)? Has the candidate been keeping physician visits as scheduled? In general, has the candidate been an active participant in his/her healthcare? It is important to remember that the reasons for noncompliance and non-adherence are multi varied and not always obvious, thereby requiring a deeper level of exploration.

### ❖ Legal History

The examiner may also wish to consider exploring the candidate's civil or criminal history or any relevant involvement with the legal system. The circumstances surrounding such issues as arrests, detainments, or incarcerations, how they were dealt with, and how they were resolved provide a wealth of information regarding past and current functioning. Involvement in the legal system regarding past or ongoing lawsuits or bankruptcies can not only shed insight as to the candidate's personality, but can also provide surgeons important information that may help *them* decide whether the candidate is a good match for their particular program.



## **Cognitive and Emotional**

### **❖ Cognitive Functioning**

Bariatric candidates should be cognitively intact, have the intellectual resources to understand the surgical procedure, the associated risks, and the behavioral changes required to manage the surgically altered stomach. Each evaluation should identify the nature and extent of any cognitive dysfunctions. It should address the type and degree of cognitive impairment or disability and whether the patient is capable of understanding the profound changes associated with bariatric surgery. If there are deficits to cognitive functioning, assessing the degree to which the candidates have the support to compensate for these deficits is essential to determining appropriateness for surgery.

### **❖ Knowledge of Morbid Obesity and Surgical Interventions**

The evaluation may identify issues about which patients need to gather additional information before they can make a really informed decision to have surgery. Patients should be able to articulate their rationale for surgery and why it is right at this time in their life. Do they have a good understanding of the nature and mechanics of their particular surgery as well as the possible risks and complications of the procedure? Do they have a good understanding of what is expected post operatively, including diet, exercise, follow-up, support group attendance, etc.? The evaluation should yield information about how the candidate has obtained this information, as well as its accuracy. If additional, patient-specific recommendations are being made, does the patient understand what they are?

### **❖ Coping Skills, Emotional Modulation, Boundaries**

Some bariatric surgery patients are especially susceptible to weight regain when faced with adversity that distracts them from attending to self-management guidelines. Clinically, we see maladaptive eating behavior (whether stress eating, emotional eating, binge eating or night eating) associated frequently with poor stress management and with an inability to effectively self-modulate intense emotions or internal sensations of arousal (whether positive or negative). A careful assessment of the candidate's coping strategies will reveal whether coping skills training is indicated. Such an assessment includes asking about coping both with *negative* stressors (uncertainty, frustration, deadlines, depressed mood, anger, anxiety or tension, or boredom) and with *positive* stressors (a raise, a promotion, a party, or vacation). A person who engages in one maladaptive coping behavior (e.g., stress eating) is at higher risk for ineffectual life stressor resolution and/or substituting another maladaptive coping behavior (e.g., compulsive shopping or alcohol abuse) if he/she has not learned more adaptive options for managing the stressor.

The assessment may also explore how a candidate copes with the emotional and physical strain imposed on him/her by the disease of morbid obesity. For example:

- a. If the candidate has experienced social discrimination or ridicule associated with morbid obesity, at what intensity has this occurred and for how long? What effect has it had on the candidate and how has he/she handled it?

- b. To what extent is the candidate demoralized over “failed” non-surgical attempts to manage morbid obesity? How does he/she handle this demoralization?
- c. Does the candidate equate morbid obesity to a “personal defect” or a “behavioral problem”? If so, does he/she compensate for this by over-extending oneself at home, at work, or with friends? Does the candidate have a tendency to take care of other people at the expense of his/her own health and well being? Is he/she a “caretaker” and puts the needs of others above his or her needs? Is the candidate able to ask for what he/she needs?
- d. Finally, to what extent does the candidate have control over his/her environment? Feeling helpless (or without control over one’s environment) increases the risk for depression<sup>9</sup> and for treatment non-adherence.<sup>10</sup>

### ❖ Psychopathology

Psychopathology need not preclude a candidate from having a bariatric surgical procedure.<sup>11,12</sup> Before scheduling surgery, however, the practitioner will need to determine and document that the candidate is emotionally stable, adequately informed of the risk for a psychiatric episode or an emotional crisis after surgery, and has a mental health action plan in place as a precautionary measure.

Specifically, the assessment needs to address:

- a. Whether there is a history of or current self-destructive or suicidal behavior (ideation, plan, or attempt), the outcome of this behavior and the resultant interventions, if any.
- b. Any history of psychiatric hospitalizations, the circumstances precipitating this, the type of treatment provided and its efficacy.
- c. Any psychiatric history including major affective and psychotic disorders. Relevant information should include a thorough history with regard to onset, course, and treatment history. Risk of possible relapse during the immediate and long-term post operative phases. How the patient plans to meaningfully address these issues should they occur, including both professional and interpersonal supports.

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<sup>9</sup> Peterson, C., Maier, S., & Seligman, M.E.P. (1993). *Learned Helplessness: A Theory for the Age of Personal Control*. New York: Oxford University Press.

<sup>10</sup> Meichenbaum, D., & Turk, D. C. (1987). *Facilitating treatment adherence: A practitioner’s handbook*. New York: Plenum.

<sup>11</sup> Powers, P.S., Rosemurgy, A., Boyd, F., & Perez, A. (1997). Outcome of gastric restriction procedures: Weight, psychiatric diagnoses, and satisfaction. *Obesity Surgery*, 7, 471-477.

<sup>12</sup> Engstrom, D. R., & Quebbemann, B. B. (2002). *Behavioral factors affect outcomes following gastric bypass vs. banding procedures*. Paper presented at the annual conference of the American Society of Bariatric Surgery, Las Vegas.

- d. The possible impact of the surgery both from the standpoint of symptom resolution as well as potential exacerbation. In general, a documented period of at least 6 consecutive months of good stabilization as it pertains to both symptom and medication management is required before the patient is ready for surgery.
- e. Outpatient psychotherapy history including recent and current treatments. Information should be obtained from the patient's treating provider(s) regarding the patient's, emotional stability, coping skills, psychological resources and ability to manage life stressors, impulse control issues and compulsions, as well as the client's capacity to follow directions and adhere to self-management guidelines. Treating mental health professionals may also provide valuable information concerning what they believe will be the most difficult change or adjustment for the patient during the post operative phase and what reservations, if any, they have about the candidate's decision to pursue bariatric surgery. With any candidate that presents with an ongoing psychological condition for which they are currently seeking treatment, it is important to remember that, due to the complexity of post surgical experiences and psychological responses to those experiences, the fact that weight loss will positively affect self-esteem or depression, *may* not be sufficient grounds to proceed with surgery.
- f. The history and course of psychotropic medications. If the candidate is stable on psychotropic medication regimen information needs to be gathered about the length of stability, frequency of follow up visits, or the need for possible titration or reevaluation of the current medication regimen prior to the surgical procedure. As many psychiatrist and general physicians are unaware of the potential changes in mood and mental status that may occur after surgery, it is vital that the evaluating clinician operate from a level of expertise that allows them to function as both an interventionist and patient advocate.
- g. The potential medication issues post-surgery. Many medications affect appetite and weight gain. Some medications interact with potential postoperative conditions, e.g., dehydration and some are no longer appropriate in the same form as pre-surgery, etc.

### **Developmental History**

The patient's developmental history can be a rich source of information. The evaluation might collect data about traumatic life events and any history of abuse or neglect, as well as the adjustment to such circumstances. Additionally this history can shed light on the client's attachment style. The attachment literature suggests that early, poor quality attachment relationships directly, negatively, impact the developing neurophysiology of the developing brain. The Orbitofrontal Cortex affects the development of the neural pathways that modulate affect and arousal. This finding is particularly salient in individuals who use their food, eating, or weight in a self-soothing or self-regulatory way. Areas of note to be gathering during the interview should likely include:

- Patient recollection about the stability of their childhood, any significant adverse events and long-term impact.

- Parental availability and stability as well as the quality of the bond with the identified patient.
- Degree and quality of attachments in social relationships outside the home.
- Any childhood history of weight-related ridicule and its related impact.
- An understanding of the childhood role that food played, along with any attempts to use it as a source of love, comfort, companionship, control or dissociation.

### **Current Life Situation**

The literature suggests that a chaotic lifestyle (triggered by life stressors) is negatively related to eating balanced meals and to following a regular program of physical activity<sup>13</sup>, and that a chaotic home life is known anecdotally to interfere with postoperative adjustment.<sup>14</sup> The assessment needs to clarify the stability of the candidate's current living situation – with respect to home, work and/or school, immediate, extended family, and close friends.

#### **❖ Stressors**

The evaluation should address whether or not the candidate is suffering any potentially destabilizing life stressors, crises, or obvious chaos and disorganization in their life. The assessment needs to tap information about:

- What significant life stressors have occurred in the past year or are ongoing. Stressors might include significant discord with children or with one's partner, divorce, death of a loved one, loss of a job, buying a home, moving, or starting college.
- What stressors the candidate expects in the upcoming year.
- How well the candidate is or is not likely to cope in light of the fact that the rapid, widespread post surgery changes and demands they may experience will be additionally taxing for them.

#### **❖ Utilization of Social Support**

The data suggest that, for medical patients, social support is positively related to faster recovery and negatively related to premature mortality.<sup>15</sup> Social support is also related to successful weight loss for people attending a general behavioral weight loss program.<sup>16</sup> Additionally, there has been some data to suggest that bariatric patients who regularly attend postoperative support groups are more successful in their weight loss and maintenance.

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<sup>13</sup> Grunberg, N., & Baum, A. (1985). Biological commonalities of stress and substance abuse. In S. Schiffman & T. Willis (Eds.), *Coping and substance abuse*. Orlando, FL: Academic Press.

<sup>14</sup> Boutacoff, L.I. *Clinical utility of the MMPI-2 in the assessment of bariatric surgery candidates*. Industry Workshop sponsored by Pearson Assessments at the 2004 Annual Meeting of the American Society for Bariatric Surgery, San Diego, CA.

<sup>15</sup> House, J.S., Landis, K.R., & Umberson, D. (1988). *Social Relationships and Health Science*, 241, 540-545.

<sup>16</sup> Wing, R.R. & Jeffery, R.W. (1999). Benefits of recruiting participants with friends and increasing social support for weight loss and maintenance. *Journal of Consulting and Clinical Psychology*, 67:132-138.

The assessment should include information about the availability and quality of the patient's social support. A number of areas may be assessed, including willingness to access support both immediately after and during the initial and long-term postoperative phase. Questions regarding childcare (if applicable) and assistance with daily living are appropriate. Questions regarding family members, friends and co-workers who may have a difficult time adjusting to the dramatic post surgery adjustments and lifestyle change—and may function as stumbling blocks or potential saboteurs may reveal valuable information regarding the client's current support system.

### **Motivation and Expectations**

Patient motivation and reasons for pursuing surgery are critical variables to assess. The evaluation should query what is *motivating* the candidate to pursue a bariatric surgical procedure at this time. Most patients will state the obvious medical benefits. It is also important to have them discuss their more private motivations, if any, for having weight loss surgery.

What expectations does the patient have concerning psychosocial, emotional and lifestyle challenges and adjustments post surgery, both short and long-term? Are they committed to actively and permanently following post-surgical guidelines for health and success?

Patients may have unrealistic expectations concerning the effect of weight loss on their physical condition, as well as on their social and professional lives. They may believe that everything in their life would be great “if only they'd lose weight.” Unrealistic expectations may lead to the perception of failure when those expectations cannot be met. This failure may then become linked to “throwing in the towel” and to giving in to old habits and unhealthy choices.

### **Summary**

In sum, the pre surgical assessment addresses whether the candidate is adequately prepared – from a psychosocial perspective – to go forward with bariatric surgery and whether there is evidence of any barriers that may interfere with patient safety and with adjustment to the surgical procedure. Some clinicians may elect to incorporate some level of intervention into the assessment process. Intervention may include education about the surgery and the requirements of success, skill-building, reframing faulty cognitions, or psycho-education.

### *Psychological Testing*

In addition to a clinical interview, there are a variety of psychological assessment instruments that may be useful in assessing potential surgery patients. There are a number of considerations involved in selecting an assessment instrument.

#### **Clinical Rationale**

- ❖ Psychological testing can be valuable to the assessment process in many ways. Test data may support or challenge a diagnosis or clinical impression, provide clinical information that may not be adequately covered or accessible within the time limits of the clinical interview, and is useful in uncovering information about the bariatric surgery candidate that may not be disclosed – whether intentionally or unwittingly – at the time of the clinical interview. As primary care physicians order medical tests during a preoperative history & physical examination to provide data to support established clinical impressions and to uncover others, psychologists who are trained in psychological testing administer tests for similar reasons.

There are many different types of psychological tests available to the trained clinician. Test selection is based on the referral question, as well as on the psychologist's training, skill level in test interpretation, familiarity with the relevant literature, and personal preference.<sup>17</sup> Depending on the type of test administered, the data may identify – more sensitively and specifically – risk factors about the candidate that the interview may miss. These data may yield valuable insights about the candidate's level of sophistication and scope of psychological resources and coping skills. They may offer information about the presence of impulse control problems, about defensiveness and potential adherence issues that may complicate and/or compromise adjustment after surgery, and about the candidate's degree of social isolation and ability to access social support. Appropriate tests may be helpful in discriminating between a depression that is secondary to living with the disease of morbid obesity (and best managed by the bariatric surgical procedure) and an insidious clinical depression; that is, a primary diagnosis which is likely to interfere with surgical outcome if not well controlled by pharmacotherapy or other mental health intervention. Finally, psychological test data may be especially helpful in suggesting the presence of long-standing characterological problems that tend to complicate or challenge interpersonal interactions with members of the treatment team and office staff and may ultimately affect patient safety and the delivery of health care.

Certain specialized tests can provide important data about the role that food has played in the candidate's life. Some candidates may have self-defeating long standing psychological relationships and entanglements with food that the surgery alone may not resolve. It is critical to objectively ascertain the extent of emotional eating, the level of mindfulness that

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<sup>17</sup> Groth-Marnat, G. (2003). *Handbook of Psychological Assessment*. Fourth edition. Hoboken, NJ: John Wiley & Sons.

one has about their eating and the degree of restraint that they have experienced with regard to food consumption. Selected specialized tests may also screen for eating disorders and suggest the need for further assessment and possible intervention before the candidate is ready to go forward with surgery.

- ❖ Currently, there is a paucity of reliable long-term psychological outcome data or data that elucidates the psychological -surgical interaction. Research regarding the psychological outcome and adjustment of patients after surgery as well as the identification of risk factors that may predict difficulties or successes is needed and is vital to the future of bariatric medicine and behavioral health. Incorporating objective instruments as a part of the psychological assessment may offer meaningful, quantifiable and standardized data for research.
- ❖ Finally, one other less obvious reason to consider the incorporation of objective measures during the assessment of a bariatric surgery candidate is for risk management and for professional liability and accountability. Data from tests that are recognized by the court may prove to be very useful in supporting one's clinical decisions and treatment recommendations. Should the need to defend our evaluative interpretations and recommendations arise, it would be helpful to have sound psychometric instruments to support our data, conclusions, recommendations or requirements.

### **Test Selection Criteria**

When evaluating the appropriateness of a psychological test for a particular surgery candidate, the clinician may want to consider the following:

- a. **Is the measure appropriate for this candidate – in terms of the person's educational and reading level, what needs to be measured, and whether or not the clinician suspects psychopathology. How similar is this patient to the standardization sample? Are there norms for subgroups?** Based on findings of a large sample of MMPI-2 data,<sup>18</sup> the majority of bariatric surgery candidates are *more similar* to medical patients and to non-psychiatric samples than to psychiatric patients. For this reason, mental health practitioners must remain mindful of psychological measures that are designed for medical patients and/or for the general population versus measures that are designed solely for psychiatric patients. Psychological measures designed for clinical populations are appropriate when the mental health practitioner can justify their use and must be interpreted within a context particular to bariatric patients. For example, Kalarchian et al.<sup>19</sup> highlights some of the issues problematic to testing in a study that compared responses from bariatric surgery candidates on two formats of the Eating

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<sup>18</sup> Boutacoff, L.I., Thompson, J., & Rupp, W. M. (2002). *Using the MMPI-2™ test to stratify bariatric surgery candidates into meaningful subgroups*. Unpublished monograph.

<sup>19</sup> Kalarchian, M.A., Wilson, G.T., Brolin, R.E., & Bradley, L. (2000). Assessment of eating disorders in bariatric surgery candidates: Self-report questionnaire versus interview. *International Journal of Eating Disorders*, 28, 465-469.

- Disorders Examination – interview and questionnaire. They found that, on questionnaire, candidates were prone to over-report binge eating and suggest that this may be related to the candidates' self-interpretation of more ambiguous concepts such as binge eating. These findings support the need to carefully assess the candidate's eating behavior in terms of *how, when, where, what, and for how long* and to not take at face value the terminology used by the candidate.
- b. **Is the instrument a psychometrically sound measure?** How reliable (stable or consistent) are the scores? Correlations of .70 are generally considered adequate, while those of .80 or more are considered very good.<sup>17</sup> **How valid (or accurate) is the test?** In other words, does the test actually measure what it claims to be measuring? Validity coefficients (correlations between the test score and the given criterion measure) should be high enough to reach statistical significance.
- c. **Does the instrument have a reliable set of scales or indicators to assess how the candidate is approaching the evaluation process and whether he/she may be distorting self-report data?** Approximately 45% of bariatric surgery candidates are susceptible to distorting self-report data.<sup>18</sup> Some candidates may be presenting themselves in an overly favorable light (e.g., they are simply “going through the hoops” to be approved for a bariatric surgical procedure, or they have learned to “shield” themselves from emotional pain by “numbing” or denying that pain). Others may over- or under-report symptomatology, based on what they believe the interviewer wants to hear. For these reasons, practitioners need to select a psychological measure that is psychometrically sound *and* includes a reliable set of validity indicators for assessing how the candidate is approaching the evaluation process and for determining whether he/she may be distorting the presentation – whether intentionally or unwittingly.
- d. **Does the test (or combination of tests) address the relevant issues?** Instruments that measure one or more of the following factors tend to address the needs of bariatric surgery candidates.
- General psychopathology.
  - Enduring personality traits or characterological problems.
  - Emotional symptoms.
  - Behavioral problems such as substance abuse potential, impulsivity, suicidal ideation, problems of attention, coping style, motivation for treatment, and likelihood to comply with treatment and adhere to self-management guidelines.
  - Maladaptive eating attitudes and behaviors.
- a. **How practical is the test** with respect to ease of administration, ease of scoring, cost, and whether or not it is recognized by health insurance as a covered psychological test.
-



## **Test Options**

The 2002 Ethics Code<sup>20</sup> of the American Psychological Association stipulates that psychologists are to ensure that tests are selected based on patient needs and on the question being asked. For this reason, it is impossible to propose that a single test or test battery is optimal for all bariatric surgery candidates. Likewise this committee does not endorse one test over another. This document is intended to provide information about the types of tests that are available and examples of tests that we know are being used in the assessment of bariatric surgery candidates. *(Please refer to Appendix A for a list of tests and measures that many practitioners are currently using)*

Psychological tests may be categorized in many different ways. In our experience, the types of instruments typically used in pre-surgical assessment include:

- a. **Multi scale inventories** that assess different aspects of a person's emotional functioning or personality based upon responses to a set of questions.
- b. **Shorter single scale inventories.** Measures that assess a specific emotional problem such as depression or anxiety.
- c. **Specialized inventories.** Types that are commonly used in our patient population include inventories that measure quality of life and those that measure eating behavior.

Each clinician must choose assessment tools based on the questions they are trying to answer, the quality of the tools, and the salient characteristics of the patient. The 2002 Ethics Code<sup>20</sup> published by the American Psychological Association recommends that the psychologist be mindful of the following when conducting an assessment:

- a. Base clinical impressions, conclusions, and recommendations on the available evidence.
- b. Understand the referral questions and select assessment tools that are known to validly address relevant questions.
- c. Complete a thorough assessment. For example, when indicated, consult with the candidate's treating psychiatrist or behavioral health provider.
- d. Recognize the limitations of your assessment tools and provide plausible alternative explanations for your findings, when appropriate.

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<sup>20</sup> American Psychological Association (2002). *Ethical Principles of Psychologists and Code of Conduct*. Washington, D.C.: American Psychological Association. Effective date: 6/01/2003. [Available on the Internet at: <http://www.apa.org/ethics/code2002>]

## Written Report

The first rule of report writing is to consider your audience. Members of the treatment team are looking for a report that is clearly and concisely written and free of psychological jargon. Surgeons/programs will differ in their preferred style and the amount of information they want to receive. We need to work with the multidisciplinary team in a way that allows the team members to understand the patients' needs and our recommendations.

### *Qualifications of the Behavioral Health Examiner*

Though not formally recognized, the practice of behavioral health as it relates to surgical weight loss is emerging as a distinct clinical specialty and has become an integral and indispensable component of the bariatric surgical treatment team. ASBS believes that the application and interpretation of objective tests, the ability to identify discrete risk factors not amenable to testing, as well as the capacity to conduct pertinent clinical interviews and to organize this information in a way that directly speaks to the adjustment of the individual after surgery requires a particular level and kind of experience that is specific to bariatric surgery. As such, ASBS recognizes the practice of behavioral health as it pertains to surgical weight loss as a distinct clinical specialty. Following this, the practitioner's declaration of a specialty in surgical weight loss should be guided by the legal and ethical standards consistent with the practitioner's professional license and state of licensure.

We feel that the minimum standards of this specialty include a basic working knowledge of the nature and mechanics of bariatric surgical procedures and their postoperative course, the physiological effects of morbid obesity and dieting, as well as a basic knowledge of the psychology of eating and morbid obesity. Furthermore, an understanding of the complexity with which these factors combine, interact, and manifest in the postoperative patient is also essential. It is also expected that evaluating clinicians hold a professional license that authorizes them to formulate a clinical diagnosis according to DSM-IV criteria. Additionally their license should authorize them to conduct psychological evaluations, perform psychotherapy or counseling of adults with an Axis I or Axis II clinical diagnosis or other psychological conditions that may be a focus of clinical attention as outlined in the DSM-IV, and administer and interpret psychological tests.

Additionally this specialization should include a *thorough* understanding of the psychosocial, financial, and physical stresses imposed on the patient who has morbid obesity and current views on how certain psychosocial factors (e.g., mood, substance abuse, personal abuse or victimization, eating behavior, and social support) may affect surgical outcome. Similarly, the evaluator should be able to identify specific vulnerabilities and risk factors that may affect the candidate's ability to cope with the radical psychological, physiological, and behavioral adjustments that often follow bariatric surgery.

Finally, clinicians should have a level of expertise that allows them to develop clinical strategies for enhancing patient adherence to treatment (self-management) guidelines over the long-term course of post-operative care, develop relapse prevention strategies, and teach or facilitate life

skills (e.g., modulating emotions, pacing oneself, and limit-setting) associated with using the surgical pouch and managing the disease of morbid obesity.

### *Conclusion*

This paper reflects the practices of a variety of knowledgeable clinicians who assess potential patients for bariatric surgery. It is intended to provide information, not regulation. The use of assessment instruments varies widely. We have included (in Appendix A) information on specific instruments that we know are used by various clinicians. One or more of them may be appropriate in your practice. The above section on testing should be helpful in determining whether a specific assessment instrument (listed or not) is appropriate for you to use. For further information on assessment of bariatric patients, we have included (in Appendix B) a list of suggested readings. In closing, this committee would like to thank the members of ASBS who have shared their knowledge and support towards the completion of this project and their continued dedication to this exciting area of clinical practice.

## Appendix A

### ASSESSMENT TOOLS AND MEASURES

#### ***Eating Attitudes And Behaviors***

**Binge Eating Scale (BES)**: Gormally J., Black, S., Datson, S. & Rardin

***Qualification Level:***

***Description:*** Designed to assess binge eating in obese subjects. Addresses the behavioral features of binge eating as well as the cognitions and feelings associated with binge eating. Shown to discriminate between obese individuals demonstrating no, moderate, or severe binge eating difficulties. The BES was designed before Binge Eating Disorder was conceptualized and although it may be a good screen to detect binge eating, it does not include the needed criteria to diagnose Binge Eating Disorder.

***Age:***

***Reading Level:***

***Format:*** 16 items. 4-point scale. Self report.

***Completion Time:***

***Scales:***

***Availability:*** Gormally J., Black, S., Datson, S. et al. (1982). The assessment of binge eating severity among obese persons. *Addictive Behaviors*. 7: 47-55. Pergamon Press.

**Binge Eating Questionnaire (BEQ)**: Halmi, Falk, and Schwartz

***Qualification Level:***

***Description:*** Assessment of bulimic behaviors. Can be used for both diagnosis and screening in normal populations. Validated in a treatment-seeking obese population.

***Age:***

***Reading Level:***

***Format:*** 12 demographic questions and 11 multiple-choice items specific to bulimic behaviors.

***Completion Time:***

***Scales:***

***Availability:*** Halmi (1985).

**Three- Factor Eating Questionnaire (TFEQ)**: Stunkard & Messick

***Qualification Level:***

***Description:*** Measure the psychological constructs of eating. Used in normal, obese, and eating disordered populations. Can be used for screening, treatment planning, and monitoring treatment effects.

***Age:***

***Reading Level:***

***Format:*** 51 items. Self report measure that includes 36 T/F items and 36 multiple-choice items.

***Completion Time:***

**Scales:** Measures three dimensions of eating behavior including cognitive restraint of eating, disinhibition, and hunger. Two additional subscales of cognitive restraint have been developed to distinguish flexible control of eating from rigid control of eating.

**Availability:** Public Domain. Stunkard A, & Messick, S. (1985). The three-factor eating questionnaire to measure dietary restraint, disinhibition and hunger. *Journal of Psychosomatic Research* (29:1) 71-83. Pergamon Press.

**Eating Inventory (EI):** Stunkard, A. & Messick, S.

**Qualification Level:** b – level\*\*

**Description:** Clinical tool developed to recognize and treat eating disturbances and disorders. Useful in treatment programs for obesity, predict weight gain following smoking and explain weight changes among the depressed. Norms and SD's of each dimension have been obtained for normal and obese groups.

**Age:** 17 years and older

**Reading Level:**

**Format:** 51 multiple-choice questions.

**Administration Time:** 15 minutes

**Scales:** Assesses 3 dimensions of eating behavior: cognitive restraint, disinhibition, and hunger.

**Availability:** PsychCorp\*.

**Questionnaire on Eating and Weight Patterns-Revised (QEWP-R):** Spitzer, R., Yanovski, S., & Marcus, M.

**Qualification Level:**

**Description:** Provides information that allows diagnosing of Binge Eating Disorder, Bulimia nervosa, and related eating disorders. Diagnosis should be confirmed by interview. Internal consistency, .75 for a weight control sample, .79 for a community sample. For the examiner, the measure includes decision rules for diagnosing Binge Eating Disorder, Bulimia Nervosa (purging and nonpurging).

**Age:**

**Reading Level:**

**Format:** 28 items that include both demographics as well as multiple-choice items.

**Completion Time:**

**Scales:**

**Availability:** Available from the Health and Psychosocial Instruments (HAPI) database. \*

**Eating Disorder Examination-Questionnaire (EDE-Q):** Fairburn & Beglin

**Qualification Level:**

**Description:** Self-report questionnaire adapted from the Eating Disorder Examination (EDE Fairburn & Cooper) that measures the frequencies of eating disorder behaviors and identifies different forms of overeating. Used in assessing episodes of binge eating among the obese (Kalarchian et al, 2000; Grilo et al, 2001) and in discriminating obese binge eaters from obese non-binge eaters (Wilson et al 1993) Internal consistency: Chronbach's alpha ranged from .78 to .93; test-retest reliability ranged from pearson's *r* .81 to .94. Looks at objective versus subjective bulimic episodes.

**Age:**

**Reading Level:**

**Format:** 41-items. 7 –point format.

**Completion Time:**

**Scales:** Subscales: dietary restraint, eating concern, weight concern, and shape concern.

**Availability:**

**Eating Disorder Inventory - 2 (EDI-2):** Garner, D.

**Qualification Level:**

**Description:** Used extensively in Eating Disorder research. Useful as screening instrument in nonpatient populations.. Use is not intended to yield a diagnosis but assess severity of symptomatology on dimensions clinically relevant to eating disorders. Normative data for bulimic and anorexic patients, male and female high school and college students. Hand score and computer versions available

**Age:** Ages 12 years and older.

**Reading Level:**

**Format:** Self report, 91 items, using 6-point scale.

**Completion Time:** Approximately 20 minutes.

**Scales:** Eight subscales and three provisional subscales: Drive for Thinness, Ineffectiveness, Body Dissatisfaction, Interpersonal Distrust, Bulimia, Perfectionism, Maturity Fear, Interoceptive Awareness, Impulse Regulation, Social Insecurity, and Asceticism.

**Availability:** Published by PAR\*.

**Eating Disorder Symptom Checklist (EDI-SC):** Garner, D.

**Qualification Level:**

**Description:** Structured, self-report form regarding frequency of eating disorder symptoms as well as demographic information. Good as aid in formulating an eating disorder diagnosis.

**Age:** Ages 12 years and older.

**Reading Level:**

**Format:**

**Completion Time:** 5-10 minutes.

**Scales:** Content areas: Dieting, exercise, binge eating, purging, laxatives, diet pills, diuretics, menstrual history, and current medications.

**Availability:** Published by PAR\*.

**Weight and Lifestyle inventory (WALI):** Wadden, T. & Foster, G.

**Qualification Level:**

**Description:** A multidimensional, multi format questionnaire designed to obtain very specific information about weight history, past weight loss attempts, weight loss goals, historical eating habits and associated patterns of behavior, physical activity, self-perceptions, psychological/emotional status and medical history. Section J of the WALI incorporates the Questionnaire on Eating and Weight Patterns-Revised (QEWPR; Yanovski, 1993).

**Age:**

**Reading Level:**

**Format:** 16 self-administered sections

**Completion Time:** 60 – 90 minutes

**Scales:**

*Availability:* Copyright: Thomas A. Wadden, PhD and Gary D. Foster, PhD. (2001). Printed in: Wadden, T. A. & Stunkard, A. J. (Eds.). (2002). *Handbook of obesity treatment*. New York: Guilford Press.

## ***Personality And Psychopathology***

### **Basic Personality Inventory (BPI):** Jackson, D.

***Qualification Level:*** c-level\*\*

***Description:*** Personality inventory for use with both clinical and normal populations. Used to identify both maladjustments and personal strengths. Normed on adults, adolescents, and special populations. Validity data is presented in the manual.

***Age:*** adolescents and adults

***Reading Level:*** Grade 5

***Format:*** 240 T/F items. Available online at [www.SigmaTesting.com](http://www.SigmaTesting.com)

***Completion Time:*** Approximately 35 minutes

***Scales:*** 12 Clinical Scales: hypochondriasis, anxiety, depression, thinking disorder, denial, impulse expression, interpersonal problems, social introversion, alienation, self-deprecation, persecutory ideas, deviation.

***Availability:*** Published by WPS\* and Sigma Assessment Systems\*

### **Personality Assessment Inventory (PAI):** Morey, L.

***Qualification Level:*** c-level\*\*

***Description:*** Inventory of adult personality and psychopathological syndromes. Useful for diagnosis, treatment planning, and screening.

***Age:*** 18 years and older

***Reading Level:*** 4<sup>th</sup> grade reading level

***Format:*** 344 item, 4-point scale

***Completion Time:*** Time: 50 – 60 minutes. Score time: 10 – 20 minutes

***Scales:*** Twenty-two nonoverlapping scales of adult psychopathology. 4 Validity Scales: (inconsistency, infrequency, negative impression, positive impression), 11 Clinical Scales: (somatic complaints, depression, anxiety, anxiety related disorders, mania, schizophrenia, paranoia, borderline and antisocial features, drug, and alcohol), 5 Treatment Scales (aggression, suicidal ideation, stress, nonsupport, treatment rejection), and 2 Interpersonal Scales (dominance, warmth).

***Availability:*** Published by PsychCorp\*. Published by PAR\*.

### **Structured Clinical Interview for DSM-IV – Axis I, Clinical Version (SCID-I:CV):**

First, M, Spitzer, R., Gibbon, M, &Williams, J.

***Qualification Level:*** b-level\*\*

***Description:*** Designated Structured clinical interview for Axis I disorders. Also available: Structured Clinical Interview for DSM-IV Axis II personality Disorders (SCID-II).

***Age:*** 18 years and older

***Format:*** Interview

***Completion Time:*** Administration Time: 45 – 90 minutes.

***Availability:*** Published by MHS\*

**Beck Depression Inventory-II (BDI-II)**: Beck, A, Steer, R., Brown, G.

***Qualification Level:*** c-level\*\*

***Description:*** Assesses the level of clinical depression in normal patients in keeping with DSM-IV criteria. Reliability: Coefficient Alpha = .92. Used for screening, diagnosis, and follow –up.

***Age:*** Ages 13 to 80 years.

***Reading Level:***

***Format:*** 21- items, 4 levels of severity.

***Completion Time:*** Administration time: 5 minutes. Self-administered or verbally administered by trained administrator.

***Scales:***

***Availability:*** Published by PsychCorp\*

**Beck Anxiety Inventory (BAI)**: Beck, A.

***Qualification Level:*** c-level\*\*

***Description:*** Assesses the level of and severity of client anxiety. Shown to discriminate between anxious and nonanxious groups in clinical populations.

***Age:*** Ages 17 to 80 years

***Reading Level:***

***Format:*** 21 items rated on a scale of 0 – 3.

***Completion Time:*** Administration time 5 – 10 minutes. Self-administered or verbally administered by trained administrator.

***Scales:***

***Availability:*** Published by PsychCorp\*

**Minnesota Multiphasic Personality Inventory - 2 (MMPI-2)**: Hathaway, S. & McKinley, J.C.

***Qualification Level:*** a-level\*\*

***Description:*** Used to assess major symptoms of social and personal maladjustment. For complete description and normative data please refer to Pearson Assessments\*.

***Age:*** 18 years and older.

***Reading Level:*** 6<sup>th</sup> grade reading level.

***Format:*** 567 true/false items. Paper and pencil, audiocassette, or computer administration.

***Completion Time:*** 60 – 90 minutes.

***Scales:*** 8 Validity Scales, 5 Superlative Self-Presentation Subscales, 10 clinical Scales, 9 RC (Restructured Clinical) scales, 15 content scales, 27 Content Component Scales, 20 Supplementary Scales, 31 Clinical Subscales.

***Availability:*** Published by Pearson Assessments\*

**Millon Behavioral Medicine Diagnostic (MBMD)**: Millon, T., Antoni, M., Millon, C., Meagher, S., & Grossman, S.

***Qualification Level:*** m-level\*\*

***Description:*** See Website for complete reliability and validity data as well as sample test and interpretive reports.

***Age:*** Ages 18 – 85

***Reading Level:*** 6<sup>th</sup> grade reading skills



**Format:** 165 item, self-report inventory. Administration: paper and pencil, audiocassette, computer. Scoring: handscoring, mail-in, system software.

**Completion Time:** Completion time 20 to 25 minutes.

**Scales:** Twenty-nine clinical scales: 3 Response Pattern Scales: (disclosure, desirability, debasement), 1 Validity Indicator, 6 Negative Health Habits Indicators: (alcohol, drug, eating, caffeine, inactivity, smoking), 11 Coping Styles: (introversive, forceful, inhibited, respectful, dejected, cooperative, oppositional, denigrated, confident, sociable, nonconforming), 6 Psychiatric Indicators Believed To Create Problems In Medical Treatment: (anxiety-tension, depression, cognitive dysfunction, emotional lability, guardedness), 6 Stress Moderators: (illness apprehension vs. illness acceptance, functional deficits vs. functional competence, pain sensitivity vs. pain tolerance, social isolation vs. social support, future pessimism vs. future optimism, spiritual absence vs. spiritual faith), 5 Treatment Prognostics: (interventional fragility / interventional resilience, medication abuse / medication conscientiousness, information discomfort / information receptivity, utilization excess / appropriate utilization, problem compliance / optimal compliance), 2 Management Guidelines: (adjustment difficulties-risk of complications due to coping and psychological issues and psychological referral – whether or not individual would benefit from psychosocial interventions).

**Availability:** Published by Pearson Assessments\*

**Rosenberg Self-Esteem Scale (SES)(RSE):** Rosenberg, M.

**Qualification Level:** none

**Description:** global and one-dimensional measure of self-esteem. Coefficient alpha's range from .77 to .87.

**Age:** adolescents and adults

**Reading Level:**

**Format:** 10 items, 4-point scale.

**Completion Time:** Less than 5 minutes

**Scales:**

**Availability:** Public Domain. Author's family would like to be kept informed of its use.

The Morris Rosenberg Foundation  
c/o Dept. of Sociology  
University of Maryland  
2112 Art/Soc Building  
College Park, MD 20742-1315

**Symptom Checklist 90 -R (SCL-90-R):** Derogatis, L.

**Qualification Level:** m-level\*\*

**Description:** Self report inventory designed for the psychological assessment of symptoms of psychopathology. May be used as a measure for screening as well as a measure of progress or outcome. Normed on adult nonpatients, adult psychiatric outpatients, adult psychiatric inpatients, and adolescent nonpatients.

**Age:** Ages 13 years and older

**Reading Level:** 6<sup>th</sup> grade reading level.

**Format:** 90 items; 5 point rating scale.

**Completion Time:** Completion time: 12 – 15 minutes.

**Scales:** 9 Primary Symptom Dimensions: (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism. 3  
**Global Indices:** (global severity index, positive symptom distress index, positive symptom total.  
**Availability:** Published by Pearson Assessments\*

## **Health Related Quality Of Life**

**Quality of Life Questionnaire (QLQ):** Evans, D, & Cope, W.

**Qualification Level:** b-level\*\*

**Description:** Measures the relationship between the client's quality of life and behaviors such as substance use, psychological health, and physical health. Highlights areas of life that may need addressing in order to change to take place. Screening tool for employee assistance, wellness, stress, and weight control.

**Age:** 18 years and older.

**Reading Level:**

**Format:** 192 items.

**Completion Time:** Administration time: 30 minutes.

**Scales:** 15 content scales and a social desirability scale. Covers 5 major domains (general well-being, interpersonal relations, organizational activity, occupational activity, leisure and recreational activity.

**Availability:** Published by MHS\*

**Quality of Life Inventory (QOLI):** Frish, M.

**Qualification Level:** b-level\*\*

**Description:** Measure of life satisfaction that can be used to measure outcomes and establishing efficacy of treatments or services.. Helps identify people at risk for developing health problems. Used in behavioral medicine assessments. Normed on nonclinical adults.

**Age:** 18 years and older.

**Reading Level:** 6<sup>th</sup> grade

**Format:** 32 items. 3-point rating of importance and 6-point rating scale for satisfaction. Paper-and-pencil or on-line administration.

**Completion Time:** Approximately 5 minutes.

**Scales:** 16 scales: Health, self-esteem, goals and values, money, work, play, learning, creativity, helping, love, friends, children, relatives, home, neighborhood, community.

**Availability:** Published by Pearson Assessments\*

**Impact of Weight on Quality of Life (IWQOL):** Kolotkin, R., Crisby, R., Kosloski, K, & Williams, R.

**Qualification Level:**

**Description:** Quality of life measure designed specifically for an obese population. Data indicate that the questionnaire has good test-retest reliability and internal consistency. **The authors of the IWQOL are currently recommending the use of the IWQOL-Lite over this version.**

**Age:**

**Reading Level:**

**Format:** 74 items. 5-point scale.

**Completion Time:** 15 minutes

**Scales:** 8 areas of functioning (health, social/interpersonal, work, mobility, self-esteem, sexual life, activities of daily living, and comfort with food.

**Availability:** Copyright owned by Duke University Medical Center. \*

**Impact of Weight on Quality of Life (IWQOL-Lite):** Kolotkin, R. & Hamilton, M.

**Qualification Level:** none

**Description:** **Recommended version by test authors.** Brief measure to assess the impact of weight on quality of life specifically for obese populations. Derived from the Impact of Weight on Quality of Life (IWQOL), Kolotkin, R., Crisby, R., Kosloski, K, & Williams, R. Correlation between the IWQOL-Lite and the original IWQOL is .97. Normed on overweight treatment-seekers) community volunteers of all weights, and diabetics. Currently in the process of being validated in clinical populations with schizophrenia and bipolar disorder who are taking antipsychotic medications.

**Age:** 18 and above.

**Reading Level:** 6.3 grade level

**Format:** 31-items. 5-point scale

**Completion Time:** 3 minutes.

**Scales** 5 scales: physical function, self-esteem, sexual life, public distress, and work. Total score and scale scores provided.

**Availability:** Copyright owned by Duke University Medical Center. \*

**Impact of Weight on Quality of Life-Kids (IWQOL-Kids):** Kolotkin, R.

**Qualification Level:**

**Description:** New measure currently being developed.

**Age:** Targeted for ages 11 and up.

**Reading Level:**

**Format:**

**Completion Time:**

**Scales:**

**Availability:**

**OMS 36-item Short Form Health Survey (SF-36):** Ware, J.

**Qualification Level:**

**Description:** Generic measure of health related quality of life used to evaluate health status in medical outcome studies. Has been used to look at the relative burden of disease as well as differentiating. The SF-36 has established internal consistency, validity, and test-retest reliability. Test does not cover or screen for eating disorders or mood.

**Age:**

**Reading Level:**

**Format:** 36 items. 5-choice response. Self-administered, computerized administration, or administration by a trained interviewer.

**Completion Time:** 5-10 minutes.

**Scales:** 8 scales: Physical functioning, role-physical, bodily pain, general health, vitality, social functioning, and mental health.

**Availability:** Requires licensing agreement. Quality Metric\* or [www.sf-36.com](http://www.sf-36.com)

**Moorehead-Ardelt Quality of life Questionnaire (M-A QoLQ):**

**Qualification Level:** Professional/Patient use

**Description:** Developed as a disease specific instrument to measure postoperative, self-perceived, quality of life in people undergoing medical/surgical intervention for obesity and severe obesity.

**Age:** 18 years old and above

**Reading Level:** 6<sup>th</sup> Grade

**Format:** 5 items. 5 -choice responses, culture free for International use.

**Completion Time:** Less than 1 minute.

**Scales:** Assesses self-esteem, physical well-being, social relationships, work, and sexuality.

**Availability:** Copyright owned by: M.K. Moorehead, Elisabeth Ardelt. \*

**Moorehead-Ardelt Quality of life Questionnaire II (M-A QoLQ II):** Moorehead, M.K. & Ardelt, E.

**Qualification Level:** Professional/Patient use

**Description:** Developed as a disease specific instrument, the improved M-A QoLQ II is a valid and reliable tool developed to measure both pre and post medical/surgical intervention of self-perceived quality of life in 6 key areas, i.e. self-esteem, physical well being, social relationships, work, sexuality, and eating behavior. Being unbiased, physician and patient friendly, this six-item questionnaire is designed specifically to address those aspects of quality of life concerns to the morbidly obese. To promote patient follow up it can be mailed or emailed to the patient and self-administered or administered directly by the multidisciplinary team. It is culture free and design with colorful universal symbols for International use.

**Age:** 18 years old and above

**Reading Level:** 6<sup>th</sup> Grade

**Format:** This 6 items 10-point likert scale is a sensitive, culture free instrument designed for International use. To be scored independently or in combination with BAROS.

**Completion Time:** Less than 1 minute.

**Scales:** **10 point likert scale** assesses six areas of Quality of Life: self-esteem, physical well-being, social relationships, work, sexuality, eating behavior.

**Availability:** Copyright owned by: M.K. Moorehead, Elisabeth Ardelt. For permission to use contact Dr. Moorehead. \*

## **Outcome Measures**

**Bariatric Analysis and Reporting Outcome System (BAROS):** Oria H. & Moorehead M.

**Qualification Level:** Professional

**Description:** BAROS analyzes bariatric outcomes in a simple, one page, objective, unbiased, and evidence-based fashion. While it can be adapted to evaluate other forms of medical intervention for weight control, it was specifically designed to create a standardized system to define five groups, (failure, fair, good, very good, and excellent), outcomes after bariatric surgery.

**Age:**

**Reading Level:**

**Format:** Uses concepts via pictures versus specific questions. Concepts include Self esteem, physical well-being, social relationships, work, and sexuality. Five choices ranging from negative to positive (adding or subtracting points) illustrated with simple drawings.

**Completion Time:**

**Scales:** Based on a scoring table that adds and subtracts points while evaluating three main areas: Weight loss, Changes in medical conditions and Quality of Life. Complications and reoperative surgery deduct points, thus avoiding the controversy of considering reoperations as failures. This instrument is designed and intended for *International use*. (It Incorporates the Moorehead-Ardelt Quality of life Questionnaire II.) .

**Availability:** Copyright owned by Horacio Oria, M.D. and Melodie Moorehead, Ph.D.\*

### **Additional Information**

#### **\*Publisher information**

- ❖ Duke University Medical Center  
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Davison Building, Room M454  
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Durham, NC 27710 USA  
(919) 681-6497
- ❖ MHS, Multi-Health Systems, Inc. 1-800-456-3003 or [www.mhs.com](http://www.mhs.com)
- ❖ PAR, Psychological Assessment Resources, Inc. 1-800-331-8378 or [www.parinc.com](http://www.parinc.com)
- ❖ Pearson Assessments 1800-627-7271, E-Mail: [pearsonassessments@pearson.com](mailto:pearsonassessments@pearson.com) or [www.pearsonassessments.com](http://www.pearsonassessments.com)
- ❖ PsychCorp Harcourt Assessment, Inc. 1-800-211-8378 or [www.PSYCHCORP.com](http://www.PSYCHCORP.com)
- ❖ Quality Metric [www.qualitymetric.com](http://www.qualitymetric.com)
- ❖ Sigma Assessment Systems [www.sigmaassessmentsystems.com](http://www.sigmaassessmentsystems.com)
- ❖ The Health and Psychosocial Instruments (HAPI) database is available online with a University password. Database can be accessed via OVID Technologies [www.ovid.com](http://www.ovid.com)
- ❖ WPS [www.wpspublish.com](http://www.wpspublish.com)
- ❖ Moorehead-Ardelt Quality of Life Questionnaire II or Bariatric Analysis Reporting Outcome System (BAROS) (Email: Melodie K. Moorehead, Ph.D. [psydrmm@aol.com](mailto:psydrmm@aol.com))
- ❖ *For a sample of a "Mental Health Report" and 9 page Skeleton Worksheet for Evaluation contact Melodie Moorehead, Ph.D. [psydrmm@aol.com](mailto:psydrmm@aol.com)*

#### **\*\*Qualification Level**

- ❖ **a -level** – Licensure to practice psychology independently, or a graduate degree in psychology (or related fields) OR have taken graduate courses in Tests and Measurements, OR proof that they have been granted the right to administer tests at this level.
- ❖ **b- level** – Must have completed graduate level courses in tests and measurements or equivalent documented training.

- ❖ **c -level** – Have b-level qualification *and* training/experience in testing, and completed an advanced degree in an appropriate profession. Some states may have additional requirements.
- ❖ **m -level** – Requires specialized degree in the health care field with accompanying licensure or certification OR proof of permission to administer test at this level.

## Appendix B

### SUGGESTED READINGS

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