Bulimia Nervosa and Massage: a case report examining Body Awareness with Co-Morbidities Anxiety and Depression.

Summary

Objectives: The study investigates the ability of Massage Therapy modalities to have a positive effect upon anxiety, depression, body image in a subject diagnosed with Bulimia.

Methods: The subject is a 25-year-old female, presenting with chronic bulimia nervosa diagnosed 8 years ago. Massage treatments were administered once a week for 5 weeks, 90 minutes per session. Techniques employed included Swedish, Deep Tissue, Reflexology, Neuromuscular Technique, Sports Massage Compressions, Passive Stretching and range-of-motion (ROM).

The intention of the work was to provide a nurturing full-body experience with an emphasis on body awareness. Measurement of anxiety, depression, and body image was accomplished with 5 self-report assessments, administered one month prior, before, and after the treatment series.

Results: A reduction in anxiety, depressive symptoms, and body image anxiety were reported, as well as an increase in body awareness.

Conclusions: This study suggests that massage therapy is a useful adjunct to traditional psychotherapy and an effective treatment choice for the comorbid symptomatology of bulimia nervosa.

Introduction:

Bulimia (literally, "Ox Hunger") is a multifactorial disorder.

Despite increased awareness and a proliferation of research on bulimia, a clear, unified understanding of the driving force behind bulimic symptomatology is still lacking (Schupak-Neuberg & Nemeroff, 1992). 10 million women and 1 million men, primarily teens and young adults, in the United States have an Eating Disorder (ED) such as Anorexia Nervosa (AN) or

Bulimia Nervosa (BN) (Markey & Vander Wal, 2007), with a 7-24% mortality rate among those affected of which 50% died of suicide and the other 50% from the effects of the ED. Bulimia becomes a way of life for chronic patients. An average of 20% of patients in follow-up study developed a chronic ED. That means 1 out of 5 stayed ill for 10 years or longer (Noordenbos et al., 2002).

Given the prevalence and severity of ED's, the author thought it important to investigate the response of an ED patient to massage therapy intervention. The author intuitively suspected that massage could produce a positive change in the condition, and found the literature supportive of that claim. Specifically, the etiology of ED & Bulimia – as we shall see – seems highly related to three factors: body awareness, anxiety, and depression. All three of these are shown to have positive responses to massage, and therefore the author designed a case report focusing on the measurement of these three dimensions.

Bulimia nervosa is an eating disorder characterized by recurrent episodes of binge eating and associated efforts to purge the ingested calories through self-induced vomiting, laxative or diuretic abuse, fasting or intensive exercise (Brambilla, 2001). The purge episode appears to have some link to a successful reduction of anxiety (Heatherton & Baumeister, 1991). One might reasonably suspect that another source of anxiety reduction (such as massage) may lower the need for purges.

Binge eaters are characterized by high standards and expectations, high and aversive self-awareness, negative effect, cognitive narrowing, removal of inhibitions, and irrational beliefs. Fear of being or becoming fat is central to the initiation of dieting and bulimic behavior. Stroeber and Humphrey

(1987) argued that bulimia often derives from an unfulfilled craving for nurturance and a remedy for intensely painful feelings of rejection and loneliness. Lehman and Rodin (1989) found that bulimics derived a greater percentage of their self-nurturance from food related sources. High self-esteem may be the single most important predictor of positive outcomes in therapy for bulimia. Reducing self-hatred and raising self-esteem may therefore be effective intervention goals (Heatherton & Baumeister, 1991). *Body cathexis,* the degree of satisfaction or dissatisfaction people have with their bodies' separate parts (e.g. face, breast, hips, waist, thighs, feet; Secourd & Jourard 1953), is an integral part of self-concept, body image, and self esteem. In short, the body is often used as a personal marker for self-assessment (Trautman et al., 2007). Once again, massage seems to positively affect feelings of nurturance, body image and self-esteem. (Breden, 1999)

Comorbid psychiatric symptoms include depressive symptoms such as depressed mood, social withdrawal, irritability, insomnia, and decreased sexual interest (Deshmukh and Franco, 2003) and 21% of chronic patients are addicted to alcohol (Noordenbos et al., 2002). In a 1998 review article, Davis et al. concluded that the most influential biological factors in the progression and maintenance of AN and BN are dysfunctions in the serotonin (5- HTP) and endorphin regulatory systems. Relatedly, Brambilla (2001) reported that psychotropic drugs, anti- depressants and SSRI's greatly improve bulimic symptoms. Treatment with anti-psychotics, however, has not proved to be successful with BN.

When seeking help from a general practitioner, ED patients report a lack of knowledge, empathy, understanding, or delay of referral as important causes of dissatisfaction (de la rie et al., 2006). In a study by Noordenbos, et al., (2002), patients who reported satisfaction with their Dr. were ones in

which physical, behavioral and psychological aspects were addressed and a dietician and psychotherapist were involved. Patients often mention that therapeutic alliance, bonding and trust, collaboration and shared commitment are helpful components of non-specialized treatment. Being able to tell their story, feeling understood, feeling supported, and gaining insight into their own problems is important to them (de la rie et al., 2006). Massage therapy, to the degree that it accomplishes these positive aspects, seems to be a valuable treatment option.

There is also specific evidence that massage and related modalities can facilitate a positive relationship with one's body. For a person who has a negative perception of his or her body, time spent experiencing the body in positive ways can be a powerful part of the healing process. Provided that the touch is non-threatening, non-judgmental and non-sexual, it can greatly encourage a caring attitude toward oneself (Wilson et al., 2005).

Yoga practitioners reported greater satisfaction with their physical appearance and fewer eating-disordered attitudes compared with non-yoga practitioners, as well as greater body awareness and responsiveness (Scime & Cook-Cottone, 2007).

According to Lawson (2003), massage commonly aims at teaching those with ED's to start feeling their bodies again, to learn what feels good, and to listen to their bodily cues. By approaching individuals challenged with eating disorders from a holistic point of view, and by empowering them to use non-drug tools and behaviors, individuals can begin to heal themselves from the inside out.

Based on the literature, it seems likely that massage can produce positive change in a subject with bulimia. To the degree that massage can support feelings of nurturance and nourishment, it may reduce some of the need for binge purge cycles. Furthermore, it seems that the most important dimensions fall into three categories:

- Body Awareness & Body Image
- Depression
- Anxiety

The author sought to measure all three dimensions in a meaningful and comprehensive way.

Methods

The subject is a white female, 25 years old, single, and living alone. She works the graveyard shift at a women's shelter, as a barista at a coffee shop and is taking classes at the community college to become a social worker. This was her first experience with body work and massage. She was diagnosed at the age of 14 with Anorexia and at the age of 17 with Bulimia. She desires to be thin, and declined to discuss her current weight, although gave the author a range of 107-160.

The subject abuses alcohol, drinking a bottle and a half of wine every day. She has no family history of obesity, does not engage in self-injurious behavior, and has had no suicide attempts. She is currently bingeing and purging, feeling a decrease in anxiety after the purge (up to 3 times daily) and

has in the past used laxatives. The disease peaked at 19 when she thought she would die. She strives for perfectionism, and has naturally low blood pressure 90/60 self-reported.

Previous treatments were inpatient for 6 weeks with pharmacological intervention of Prozac for depression at 18 years old. Very structured weigh-ins, was watched while eating and using the bathroom and was seeing a nutritionist. The subject then had partial-day treatment from 11a-6pm after medically stable. Pharmacological intervention was Topomax for the alcohol cravings and to decrease the binge urges, which made her, feel "speedy" and unable to concentrate.

The subject was referred to the author by her psychotherapist, and concurrently maintained her once-weekly psychotherapeutic sessions for the duration of this study.

One month prior to commencing the treatment series, the author met with the subject and gathered preliminary data from questionnaires (described below). Those same questionnaires were given to the subject at the start of the series, and then again at the end. Due to the short treatment period (5 weeks), the author considered additional measurement points to be of limited value and a possible distraction.

The author administered 90 minutes of massage once weekly for 5 weeks. Techniques used were: foot reflexology, sports massage compressions, range-of-motion gymnastics, deep tissue, Swedish, NMT, and integrated touch. The broad intention with these methods was to increase parasympathetic nervous system activity, retrain neural motor and sensory pathways, and provide relaxation to the muscles mechanically. Special care was taken to work within the comfort levels of the subject.

Initial intake showed that the subject had poor digestion, bloating, abdominal discomfort, acid reflux, sore neck and shoulders, and low back pain of 6 (from 0-10) when bending over. Sleep is often split into shifts, sleeps 3 hours at the women's shelter mid-shift and 6-8 hours in the daytime. There were no contraindications noted, no current medications and the client had no expected outcome of change regarding her condition during this treatment series.

5 self-report tests were used to quantify and assess Depression, Anxiety, Body Image Anxiety, and Body Awareness. The first test was a Body Map given to me by the subject's psychotherapist, with body parts broken down into compartments. Each compartment was to be filled in by the subject with numerical indicators for body satisfaction, ranging from +2 for "very satisfied" and -2 "very dissatisfied". This provided a visual representation of the subject's feelings toward each part of her body. The Beck Depression Inventory (BDI), a 21-question multiple-choice inventory, is one of the most widely used instruments for measuring the severity of depression. The Body Awareness Questionnaire (Shields, Mallory and Simon 1989), is an 18-item scale designed to assess self-reported attentiveness to normal non-emotive body processes, specifically, sensitivity to body cycles and rhythms, ability to detect small changes in normal functioning, and ability to anticipate bodily reactions. The Clinical Anxiety Scale (CAS) (Thyer, 1984) is an 25 point assessment instrument that has good reliability and validity in assessing how much anxiety the subject is feeling at that moment, and the Body Image Anxiety Scale is similar to the body map described above and asks for numerical quantification of anxiety for each body part: 0 for "never" and 4 for "almost always".

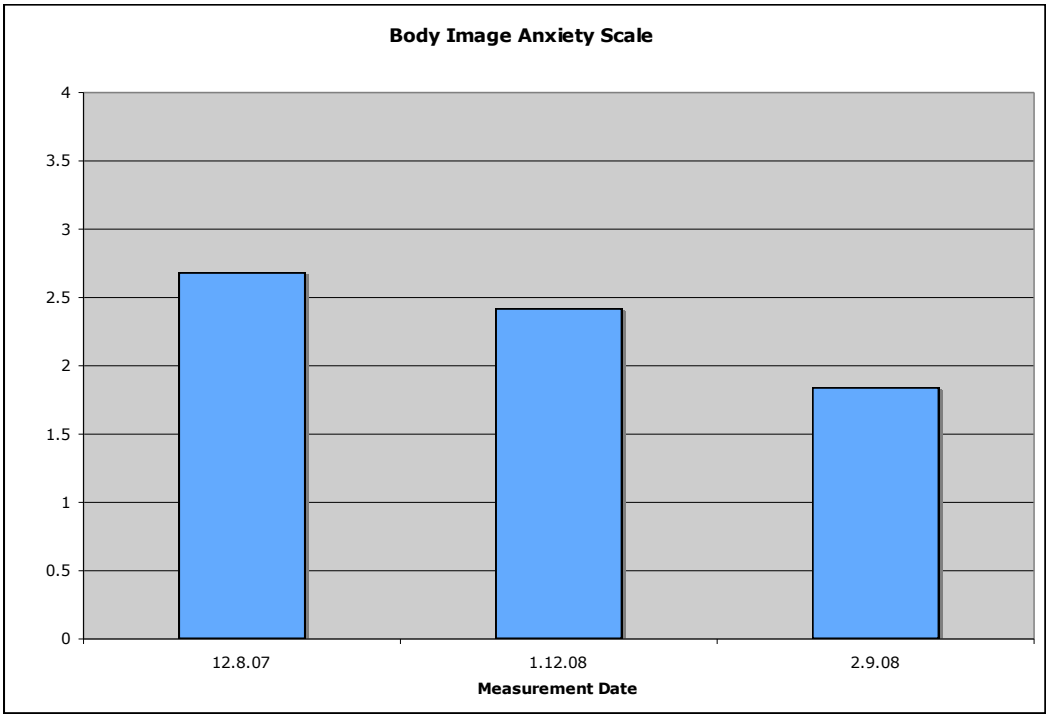
Results

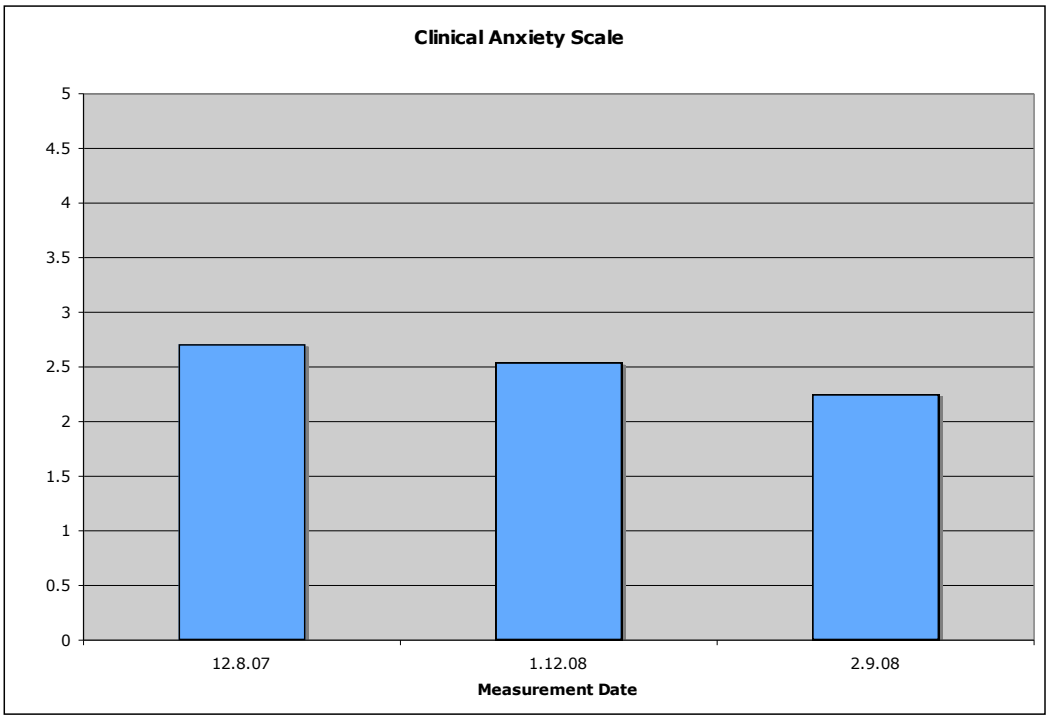
Trying to provide a positive, meaningful experience, the sessions were kept flexible and responsive to the needs of the moment. During the first treatment, the subject was prone to guarding and holding. This lessened considerably by the next appointment. Starting with mostly foot reflexology during the first session (due to her dislike of her other body parts) and gentle Swedish to introduce touch, we moved into progressively deeper structures. Every body part was worked on during the series and each session's goal was a whole-body experience.

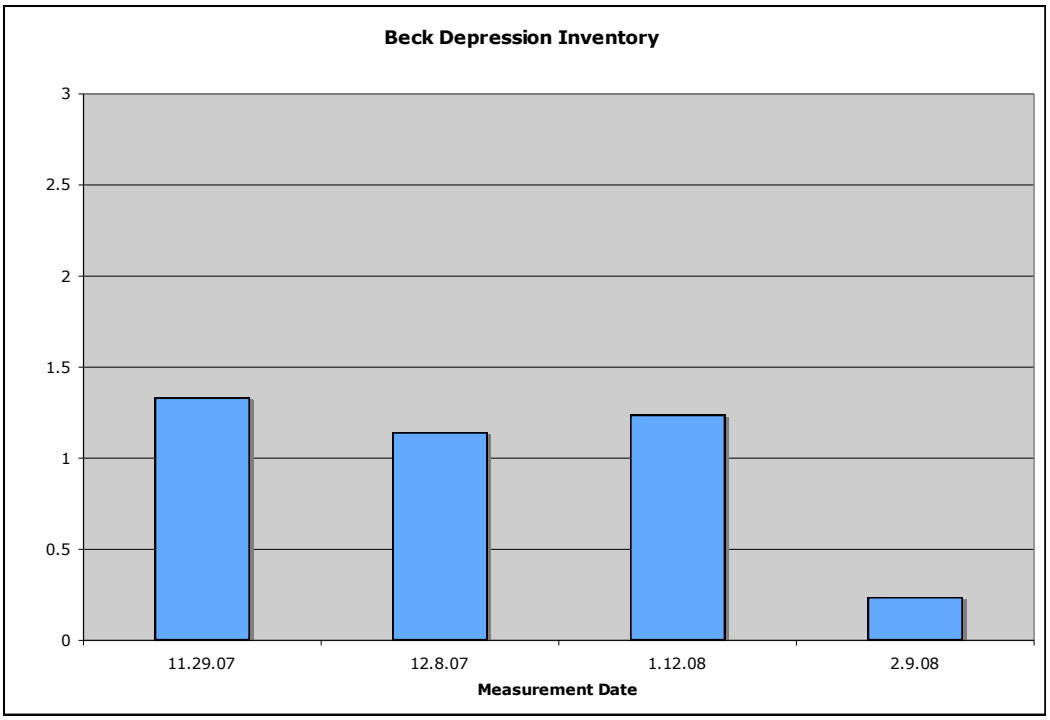
Some specific techniques employed were; sidelying deep tissue on the back, sternal fascial pulling, illiopsoas, pterygoid and hyoid work, head scrubbing "washing her hair", deep tissue on the external intercostals, holding the neck and head, chest effleurage and making connections between body areas with long continuous strokes. An emphasis was put on body awareness and bodily limitation.

The subject's own experience of the series was quite positive. On the initial (pre-treatment) meeting, she said " I have been feeling detached from my body for a while now". By the series end she described it as a "very healing experience", Though it was hard for her to trust somebody at first, she thinks it should be part of every ED treatment. "Whether you want to acknowledge your body or not, you have to, because you are being touched all the time. It's grounding." She also reported that massage was supporting her other therapeutic work in unforeseen ways. She felt "more proactive" in her own recovery.

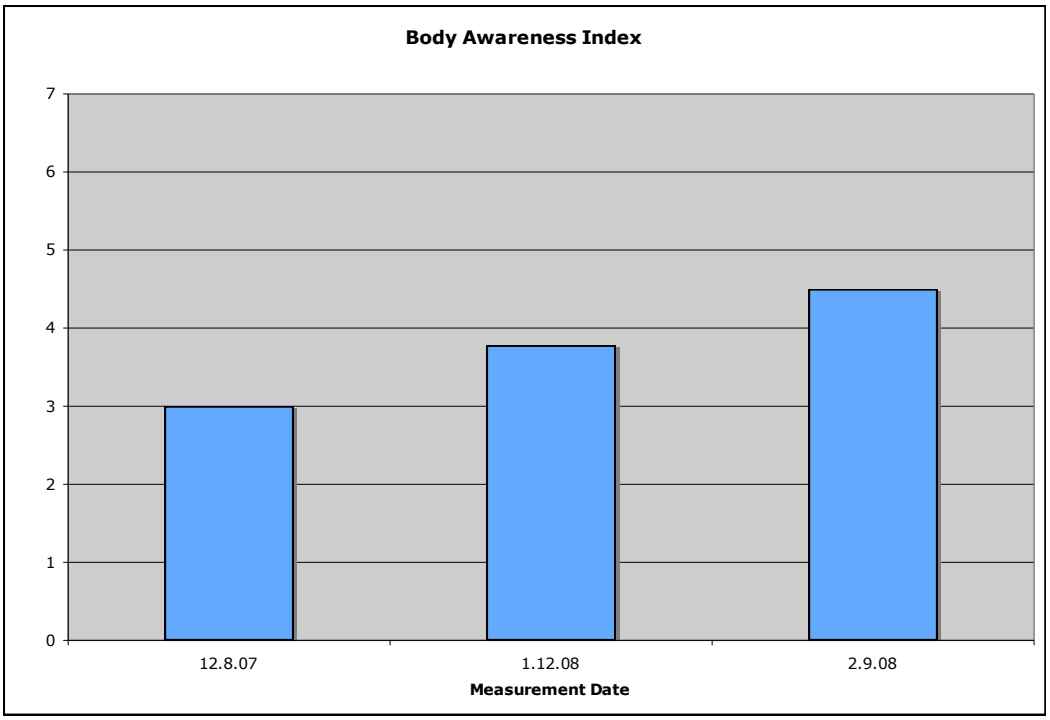
As expected, the biggest challenges came during work on areas associated with negative self-image. She wore sweatpants through the series, and opted not to have her bare legs worked on. She did allow sports massage compressions of gluteals, hamstrings and quads on the second and following appointments, with gymnastic ROM's and passive stretching. There were scattered emotional releases in the first 3 sessions. Each time, the author asked the subject if she would like to stop, and each time the subject elected to keep working. The areas that elicited strong emotion correlated quite closely with those body-map regions that showed the most improvement after the series (see below).



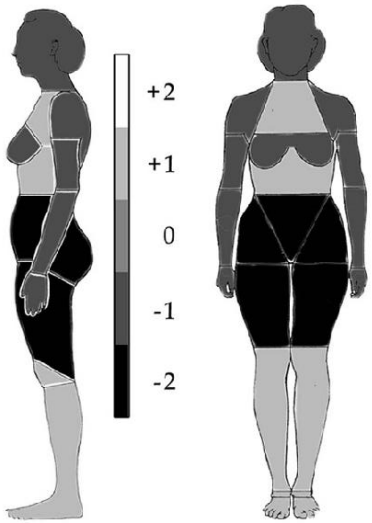

Clinical Anxiety Scale
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
12.8.07
1.12.08
2.9.08
Measurement Date



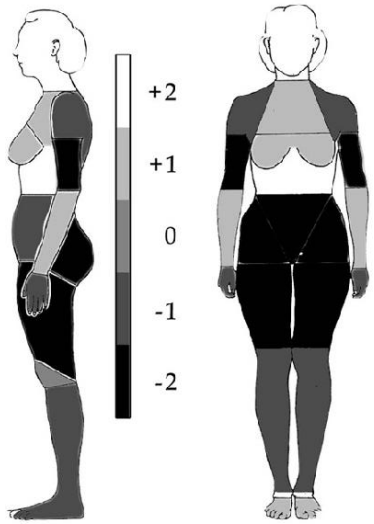
All questionnaires (but one) had three dates of collection – a baseline 4 weeks prior to the treatment series, one measure just prior to the first session, and one measure before the last session. The Beck Depression Inventory was additionally administered at 6 weeks prior for a total of 4 measurements. As can be seen in the graphs, body image anxiety and clinical anxiety both gradually decreased. While depression decreased initially, it then spiked before the first massage treatment and plummeted after 5 weeks. Meanwhile, body *awareness* shows a steady incline. The Body Map also shows a steady, positive progression -especially in the upper head, neck and chest area.


Body Awareness Index
7
6
5
4
3
2
1
0
12.8.07
1.12.08
2.9.08
Measurement Date

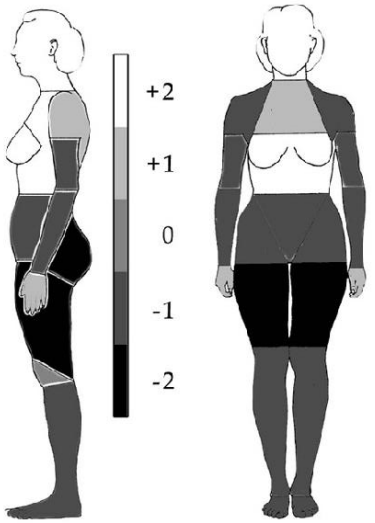
Body Image: One Month Prior



Body Image: Just Before Series



Body Image: After Series



Discussion

All of the results of this study share one major caveat: the treatment period was very compressed, and allowed for relatively few data points. Given these constraints, however, the author was impressed by the improvements in all measured categories. Depression, anxiety, body image anxiety all decreased – some significantly. Body awareness increased 27% in only 5 weeks.. The subject's satisfaction of her face, for example, increased from -1 to +2 on the body map. Her abdomen went from a -2 to -1, breasts from -1 to +2 at the end. Especially interesting were the positive changes in answers on the Body Awareness Index: she suddenly began noticing how her body reacted to various foods, when she bumps herself whether or not it will become a bruise, and awareness of activity level cycles throughout the day.

Spacing out the treatments over a longer period of time may be favorable to allow more time for the subject to integrate the sensations and bodily changes. Simply adding more data collection points may be useful, although doing so may interfere with the work (Markey & Vander Wal, 2007). It would be interesting to note how long the effects of the massage can last; the author would have thus preferred a longer post-treatment measurement period.

It is suggested that massage clinicians working with ED patients attempt Muscle Energy Techniques (MET) and the like, in order to encourage subject participation, engage the nervous system, and increase body awareness. This (and other active modalities such as Thai massage) would be especially good for patients who prefer to stay clothed.

Clearly, working within a healthcare team is important. The author was in regular communication with the psychotherapist, and this was key in understanding the link between the psychophysiology and pathophysiology of the disease.

The literature on bulimic purging shows that it is done (at least in part) for a biochemical benefit. Endorphin levels increase after the purging, and may be likely to induce feelings of well being (Deshmukh & Franco, 2003). Endorphins also increase after massage (Janson Cohen, 2005); "Endorphins are released naturally from certain regions of the brain and are associated with the control of pain. Massage, acupressure, and electronic stimulation are among the techniques that are thought to activate this system of natural pain relief." It seems that both massage and bulimic purges accomplish this same goal.

Massage has also been shown to positively affect serotonin levels, and provide some relief from anxiety and depression (Juhan, 2003). This is another likely mechanism for the possible benefit of massage, given the aforementioned efficacy of SSRI medication, and the prevalence of anxiety and depression as precursors for binge-purge episodes (Heatherton & Baumeister, 1991)

Lastly, it appears possible that while the subject had historically sought a great amount of nurturance from food, some percentage of that nurturance was now instead being drawn from tactile stimulation.

Given the complexity of eating disorders – and of bulimia specifically – no one intervention seems likely to address every aspect. However, the author's experience in this case suggests that there is a profound physical component to this pathology, and that massage is one method of effective treatment.

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