

## Review Article

# Anorexia Nervosa and Bulimia Nervosa Critical Analysis of It's Treatment: Implications and Interventions

Flourish Itulua-Abumere<sup>1,2</sup>

<sup>1</sup>Alumna, University of Roehampton, London, UK

<sup>2</sup>H269 Ikota Shopping Complex, Lekki-Epe Express Road, VGC-Lagos, Nigeria

Corresponding Author: Flourish Itulua-Abumere; email: flourishabumere@gmail.com

Received 21 January 2013; Accepted 10 March 2013

Academic Editors: M. Rahman and A. Samaha

Copyright © 2013 Flourish Itulua-Abumere. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

**Abstract.** The diagnostic consideration of the eating disorders anorexia nervosa and bulimia nervosa has been given much focus over the last two decades than previously, as clinicians have become more aware of the frequency of these disorders and the difficulties associated with their treatment. Anorexia nervosa and bulimia nervosa as known in the DSM-IV as eating disorders are characterized by physically and/or psychologically harmful eating patterns. Although the psychological explanation of what we now call anorexia nervosa have been known about for centuries, it has only recently attracted much interest, due to greater public knowledge and increased incidence (according to Gross and McLveen 2006, the latter claim has been disputed). Most people suffering from anorexia nervosa and bulimia nervosa start by fasting. Anorexia nervosa is a deliberate self-starvation. A person whose body weight is less than expected for his or her body height and weight is considered to be anorexic. In contrast, bulimia involves binge eating a large quantity of food followed by purging by self-induced vomiting, enemas, laxatives, or diuretics.

**Keywords:** Anorexia nervosa, bulimia nervosa, DSM-IV, ICD-10, binge eating

## 1. Introduction

“Anorexia and bulimia nervosa have both been defined out of the wide range of psychologically relevant problems of weight and eating from which people suffer. However, many people with clinically significant eating disorders do not precisely fulfil the diagnostic criteria for anorexia and bulimia nervosa disorders. Thus, the main diagnoses are essentially archetypes, albeit valuable ones” [1]. The concept of anorexia nervosa has existed since the 19th century. In contrast, bulimia nervosa was defined less than three decades ago [2]. Both concepts have evolved somewhat but each

has remained useful and they are included in the main psychiatric classificatory systems, DSM-IV and ICD-10 [3, 4]. The American DSM-IV will be applied in describing the diagnostic criteria for both disorders in this essay.

Anorexia: Three diagnostic criteria have been recommended by [6] for anorexia nervosa. These includes: “(A) actions that are deliberately planned to lead to pronounced weight loss; (B) developing an unusual behaviour that is defined by a morbid fear of becoming fat; and (C) evidence of an endocrine disorder, amenorrhea in females, and loss of sexual potency and sexual interest in males” [7]. While others have suggested other diagnostic criteria since, they generally

Table 1: Common symptoms of anorexia/bulimia nervosa.

Anorexia nervosa	Bulimia nervosa
<ul style="list-style-type: none"> <li>• Patients often deny complaints</li> <li>• Amenorrhea, cold intolerance</li> <li>• Abdominal pain, constipation</li> <li>• Sleep disturbances, anxious energy, depression</li> </ul>	<ul style="list-style-type: none"> <li>• Patients may be secretive about disordered eating</li> <li>• Swelling of hands feet, irregular menses</li> <li>• Abdominal pain, bloating</li> <li>• Recurrent vomiting, heartburn, headaches</li> </ul>

[5].

involve aspects of Russell's original criteria. The DSM-IV diagnostic criteria for anorexia nervosa are shown in Table 3. [7].

One other diagnostic criterion for anorexia nervosa is the change of behaviour that is designed to produce marked weight loss. There have been different general agreements that a drive for thinness is necessary for the diagnosis. Different investigators have described this criterion in somewhat differing terms: 'the relentless pursuit of thinness' [8, 9]; 'the pursuit of thinness' [10]; 'the deliberate wish to be slim' [11]; or the pursuit of thinness as a pleasure in itself [12]. Another diagnostic criterion for anorexia nervosa is the intense of putting on body weight or becoming fat. The diagnostic criteria suggested by Russell's correspond with criteria B and C in DSM-IV. It involves both the morbid fear of becoming fat and the regulation of self-esteem to an excessive degree by concerns with weight and shape. This relates to attitudes and feelings the person has about her body or particular body part [7].

As a result of the significant weight loss, anorexics take on an emaciated appearance. Literally, anorexia nervosa means 'nervous loss of appetite'. However, anorexics are often both hungry and preoccupied with thoughts of food. For example, they may constantly read recipe books and may prepare elaborate meals for their friends. Anorexics themselves, however, will avoid most calorie-rich foods such as meat, milk products, sweets and other desserts, and will often limit their consumption to little more than a lettuce leaf and carrot. Anorexics also demonstrate a reduced pleasure in eating [14]. Although studies indicate that anorexics do not experience deficiencies in taste, [13] have shown that they have a *low hedonic responsiveness* to taste and an aversion to the oral sensation of fat [13].

In DSM-IV, two sub-types of anorexia nervosa are identified, both of which contribute to the denial to sustain a body weight that is lower than the usual body weight of the person's height, age and sex. "The *restricting type* of anorectic loss weight by continuously fasting and participating in too much physical activity. The *binge eating/purging type* falls between the periods of starving and 'binge eating' were by the food that is usually prevented is taken-in and used-up in large quantities" [11,14]. Shadowing this, the feelings of guilt and shame that are experienced as a result of the 'binge' lead the anorexics to use laxatives or self elicited vomiting to

discharge ingested food from the system. These experiences are diagnostic criteria for anorexia nervosa [14, 15].

Another diagnostic criteria of anorexia nervosa is a *distorted body image* were by the person no longer acknowledge the slenderness of there physical body structure even though their appearance may show protruding bones, many anorexics still see themselves as being fat and deny that they are 'wasting away' [15]. As [9] have observed anorexics: 'vigorously defend their gruesome emaciation as not being too thin....they are identified with the skeleton-like appearance, they actively maintain it and deny its disorders'. As [16] has noted, the fact that many people who would be diagnosed as anorectic do not perceive themselves as having a disorder, he suggests that data relating to both the incidence and prevalence of the disorder should be treated with caution [16].

Research reported by [17] found females with severe restrictive anorexia nervosa to have histories of glandular fever like illnesses immediately preceding the onset of their eating disorder. Park and his colleagues suggest that immune-induced alterations in central home-ostasis, particularly involving *corticotrophin-releasing hormone*, could trigger and perpetuate a behavioural response leading to a particularly severe form of restrictive anorexia, a suggestion which is speculative but biologically plausible [18].

Bulimia: According to the DSM-IV diagnostic criteria, binge eating is one of the major diagnostic criteria for bulimia nervosa [4, 20]. Although bulimia nervosa can accompany anorexia nervosa, most bulimics are at least average in weight and some are unquestionable obese [21]. "Bulimia nervosa is characterised by periodic episodes of 'compulsive' or 'binge' eating that is, the rapid and seemingly uncontrolled consumption of food, especially food which is rich in carbohydrates. The binge is finished either by abdominal pain or in situation's were its the purging type, by the ejection of food using diuretics, laxatives or self-induced vomiting" [18]. Some bulimics begin their binge by eating a coloured 'maker' food and after they have finished, will continue purging until the maker has re-emerged [19]. According to Russell, the diagnostic criteria for bulimia nervosa have three components at the time he proposed the criteria. These includes: "(A) powerful and intractable urges to overeat; (B) avoidance of the fattening effects of food by deliberately causing vomiting, abusing purgatives, or both; and (C) a

Table 2

- 
- |    |  |
|----|--|
| A. | Refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., weight loss leading to maintenance of body weight less than 85% of that expected, or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected). |
| B. | Intense fear of gaining weight or becoming fat, even though underweight.   |
| C. | Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight.  |
| D. | In postmenarchal females, amenorrhea, i.e., the absence of at least three consecutive menstrual cycles. (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration).  |
- 

*Specify type:*

**Restricting Type:** during the current episode of Anorexia Nervosa, the person has not regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas)

**Binge-Eating/Purging Type:** during the current episode of Anorexia Nervosa, the person has regularly engaged in binge-eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas)

---

[4].

morbid fear of becoming fat” [7]. Although, these diagnostic criteria have undergone various modifications in the recent DSM-IV diagnostic criteria, however, they are still similar with that of the DSM-IV criteria which is shown on Table ?? [7].

Russell's first diagnostic criteria of bulimia nervosa (powerful and intractable urges to overeat) however, corresponds to DSM-IV criteria A, B, and D. while the second component of Russell diagnostic criteria for bulimia nervosa (avoidance of the fattening effects of food by inducing vomiting) corresponds with criterion C in DSM-IV [7]. In some cases, “bulimia nervosa patients may complain of depression, fatigue, or headaches. Some may suffer from abdominal pain, bloating or heartburn; these symptoms are usually attributed to binge-purge cycles” [5]. Although bulimics are mostly able to keep up a standard body weight, they seem to move in between weight increase and weight decrease. The binge-purge behaviour of the bulimic is typically accompanied by feeling of guilt. The purging of food produces feelings of relief and a commitment to severely restrictive diet which ultimately fails [22].

Patients suffering from anorexia and bulimia nervosa have signs and symptoms that differs as well as different diagnostic criteria for these disorders. Patients with anorexia nervosa and bulimia nervosa disorders also tend to differ in their motivation to receive treatment. Because of the nature of anorexia nervosa disorder for instance, patient often deny complaints, including concerns about low body weight this may make motivation for treatment difficult as they do not notice themselves that there is a problem. Motivation for treatment may also differ for bulimia nervosa patients because they frequently look well and may have only a few apparent symptoms or signs of illness and also difficult to detect physically therefore patients may feel less motivated inside of them seek for treatment [5]. Motivation to receive treatment may also differ with anorexia nervosa disorder as most of the physical symptoms and signs normally indicate the effects of caloric restriction and subsequent weight loss which is now viewed in western societies as fashionable and

keeping fit, so patient may feel less motivated to receive treatment as this is already portrayed in media as fashionable. “However given the Western society's current emphasis on thinness, many clients and even their families and friends may not recognise the serious implications of the weight loss and this may influence the patient motivation for receiving treatment”. [5].

Previous analysis of the treatment for anorexia nervosa and bulimia nervosa has revealed that people suffering from these disorders can and do differ in their motivation to receive treatment. But there seems to be wide possible outcome if there are eventually motivated to receive treatment, particularly in the case of anorexia nervosa. The treatment normally for anorexia and bulimia nervosa differs and that also influences the patient motivation to receive treatment. For example, the most common form of treatment for bulimia nervosa is cognitive-behavioural, originally formulated by [23]. Such treatment typically includes an educational/dietary component, particularly in the early stages, but gradually the focus will have moved on to cognitive factors. Bulimia nervosa patients may not be comfortable with such type of treatment because this treatment tend to place a fair amount of emphasis on the dietary side of eating disorders and will focus on the principles of good nutrition, biological factors controlling weight and the effects of vomiting and purging. This will obviously make a difference in the motivation to receive such treatment [24]. While this is the case for bulimia nervosa disorder, it may differ from anorexia nervosa. Anorexia nervosa patients may differ in their motivation to receive treatment because the kind of treatment available may not be beneficial to their current lifestyle. For instance, the knowledge patients have for the physical treatment of anorexia nervosa such as the use of chlorpromazine and insulin, as advocated by [25] or the most drastic form of treatment (tube feeding) on forced basis may make it difficult for them to ask for treatment [21].

On the other hand, patients suffering from these disorders differ in their motivation to receive treatment depending on their understanding of how serious their illness is. This is

Table 3

---

A.	Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following: (1) eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances (2) a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating)
B.	Recurrent inappropriate compensatory behavior in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.
C.	The binge eating and inappropriate compensatory behaviors both occur, on average, at least twice a week for 3 months.
D.	Self-evaluation is unduly influenced by body shape and weight.
E.	The disturbance does not occur exclusively during episodes of Anorexia Nervosa.

Specify type: **Purging Type:** during the current episode of Bulimia Nervosa, the person has regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas

**Nonpurging Type:** during the current episode of Bulimia Nervosa, the person has used other inappropriate compensatory behaviors, such as fasting or excessive exercise, but has not regularly engaged in self-induced vomiting or the misuse of laxatives, diuretics, or enemas

---

[4].

because the anorexic patient often believes that the weight loss is normal and attractive while the bulimic patient may feel that purging is one great way of preventing obesity. It is then impossible to have any form of motivation to receive treatment when the anorexic condition may be encouraged by friends or family members who envy thinness or by TV or internet advert that encourages people to have low body fat. If families of anorexia and bulimia nervosa patients deny the problem of their disorder, this can be obstructive giving patients less motivation to receive treatment and making the intervention of family therapy a difficult option [26].

## 2. Conclusion

Difference in the motivation of anorexics to receive treatment can have implications in the choice of intervention that they will receive. Although medical intervention typically becomes a more acute issue with extreme weight loss, recent research seems to cast doubt on the necessity for lengthy inpatient treatment [21]. "Patients who are dieting or engaging in prolonged eating behaviour are usually not able to take part passively in the therapeutic process; therefore efforts to improve nutritional and weight status are an intrinsic part of the clinical agenda from the beginning of treatment" [7]. The processes of dietary rehabilitation and weight restoration are not carried out in isolation from the "real work" of cognitive behavioural therapy; rather, they are closely integrated with the ongoing examination of the client's core beliefs. In that case if the client has no core beliefs it may have implications for the choice of intervention they will receive [7, 27].

## References

- [1] B. Palmer, Diagnosing and Assessing Eating Disorders, *Psychiatry*, **4**, no. 4, 1–5, (2005).
- [2] G. F. M. Russell, Thoughts on the 5th Anniversary of Bulimia Nervosa, *European Eating Disorders Review*, **12**, 139–152, (2004).
- [3] World Health Organisation, in *The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines*, Geneva, 1992.
- [4] American Psychiatric Association, in *Diagnostic and Statistical Manual*, APA, Washington, DC, 1994, 4th edition (DSM-IV).
- [5] C. Pomeroy, Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorder: Assessment of Physical Status, *American Psychological Association*, **vii**, 177–203, (2001).
- [6] G. F. M. Russell, in *Anorexia Nervosa- Its Identity as an illness and and Its Treatment*, J. H. Price, Ed., Modern Trends in Psychological Medicine (Vol. 2), Butterworths, London, 1970.
- [7] K. D. Brownell and C. G. Fairburn, in *Eating Disorders and Obesity, A Comprehensive Handbook*, The Guilford Press, New York, 1995.
- [8] H. Bruch, in *Eating Disorders: Obesity, Anorexia Nervosa and the Person Within*, Basic Books, New York, 1973.
- [9] H. Bruch, in *The Golden Cage: The Enigma of Anorexia Nervosa*, Routledge and Kegan Paul, London, 1978.
- [10] S. Theander, Outcome and Prognosis in Anorexia Nervosa and Bulimia: Some Results of Previous Investigations, Compared with those of a Swedish Long-Term Study, *Journal of Psychiatric Research*, **19**, 493–508, (1985).
- [11] M. Selvini-Palazzoli, in *Anorexia Nervosa*, S. Arieti, Ed., The World Biennial-of-Psychiatry and Psychotherapy, Basic Books, New York, 1970.
- [12] R. Ziegler and J. Sour, A Naturalistic Study of Patients with Anorexia Nervosa Admitted to a University Medical Center, *Comprehensive Psychiatry*, **9**, 644–651, (1968).
- [13] S. R. Sunday and K. A. Halmi, Taste Perceptions and Hedonics in Eating Disorders, *Physiology and Behaviour*, **48**, 587–594, (1990).
- [14] T. F. Cash and T. A. Brown, Body-Image in Anorexia Nervosa: A Review of the Literature, *Behaviour Modification*, **11**, 487–521, (1987).
- [15] T. F. Cash and E. A. Deagle, The Nature and Extent of Body Image Disturbance in Anorexia Nervosa and Bulimia Nervosa:

- A Meta-Analysis, *International Journal of Eating Disorders*, **22**, 107–125, (1997).
- [16] J. E. Cooper, On the publication of the Diagnostic and Statistical Manual of Mental Disorders (4th edition), *British Journal of Psychiatry*, **166**, 4–8, (1995).
- [17] R. J. Park, J. M. Lawrie, and C. P. Freeman, Post-Viral Onset of Anorexia Nervosa, *British Journal of Psychology*, **166**, 386–389, (1995).
- [18] R. Gross and R. McLveen, in *Abnormal Psychology*, Hodder and Stoughton, London, 2006.
- [19] H. G. Pope Jr and J. I. Hudson, Antidepressant medication in the treatment of bulimia nervosa, *Psychopathology*, **20**, no. Suppl 1, 123–129, (1987).
- [20] T. Legenbauer, C. Vogele, and H. Ruddel, Research Report: Anticipatory Effects of Food Exposure in Women Diagnosed with Bulimia Nervosa, *Appetite*, **42**, 33–40, (2004).
- [21] E. Button, in *Eating Disorders: Personal Construct Therapy and Change*, Wiley, Chichester, 1993.
- [22] D. Sue, D. Sue, and S. Sue, in *Understanding Abnormal Behaviour*, Houghton-Mifflin, Boston, 4th edition, 1994.
- [23] C. G. Fairburn, A Cognitive-behavioural approach to the management of bulimia, *Psychological Medicine*, **11**, 707–711, (1981).
- [24] M. P. Olmsted, R. Davis, and D. M. Garner, Efficacy of a Brief Group Psycho-educational Intervention for Bulimia Nervosa, *Behaviour Research and Therapy*, **29**, 71–83, (1991).
- [25] P. J. Dally and W. Sargant, A New Treatment of Anorexia Nervosa, *British Medical Journal*, **1**, 1770–1773, (1960).
- [26] A. Jansen, Towards Effective Treatment of Eating Disorder: Nothing is as Practical as good theory, *Behaviour Research and Therapy*, **39**, 1007–1022, (2001).
- [27] G. T. Wilson, Cognitive Behaviour Therapy for Eating Disorders: Progress and Problems, *Behaviour Research and Therapy*, **37**, S79–S95, (1999).

Editor-in-Chief  
Mostafa Z. Badr, USA

Geographical Editors  
Christopher Corton, USA  
Jörg Mey, Spain  
Marcelo H. Napimoga, Brazil  
Nanping Wang, China

Associate Editors  
Leggy A. Arnold, USA  
Yaacov Barak, USA  
Thomas Burris, USA  
Ignacio Camacho-Arroyo, Mexico  
John Cidlowski, USA  
Lluis Fajas Coll, Switzerland  
Frédéric Flamant, France  
Mario Galigniana, Argentina  
Jan-Åke Gustafsson, USA  
Anton Jetten, USA  
Sridhar Mani, USA  
Antonio Moschetta, Italy  
Bryce M. Paschal, USA  
Bart Staels, France  
Yu-Jui Yvonne Wan, USA  
Jiemin Weng, China  
Wen Xie, USA

Editorial Board  
Brian J. Aneskievich, USA  
Jeffrey Arterburn, USA  
Robert G. Bennett, USA  
Carlos Bocos, Spain  
Moray Campbell, USA  
Susana Castro-Obregon, Mexico  
Thomas Chang, Canada  
Taosheng Chen, USA  
Huang-Sik Choi, Republic of Korea  
Austin Cooney, USA  
Pietro Cozzini, Italy  
Maurizio Crestani, Italy  
Paul D. Drew, USA  
Nourdine Faresse, Switzerland  
Grace Guo, USA  
Heather Hostetler, USA  
Cheng Huang, China  
Wendong Huang, USA  
Jorge Joven, Spain  
Hiroki Kakuta, Japan  
Yuichiro Kanno, Japan  
Christopher Lau, USA  
Antigone Lazou, Greece  
Chih-Hao Lee, USA  
Xiaoying Li, China  
Yong Li, China  
Xiaochao Ma, USA  
Shaker A. Mousa, USA  
Suong N. T. Ngo, Australia  
Noa Noy, USA  
Sergio A. Onate, Chile  
Eric Ortlund, USA  
Petr Pávek, Czech Republic  
Richard P. Phipps, USA  
Eric Prossnitz, USA  
Enrique Saez, USA  
Edwin R. Sanchez, USA  
Andrea Sinz, Germany  
Knut Steffensen, Sweden  
Cecilia Williams, USA  
Xiao-kun Zhang, USA  
Chun-Li Zhang, USA  
Changcheng Zhou, USA

Dear Colleagues,

Although publications covering various aspects of nuclear receptors (NRs) appear every year in high impact journals, these publications are virtually buried among an overwhelming volume of articles that are only peripherally related to NRs. The latter fact prompted a group of prominent scientists active in the field of nuclear receptor research to conclude that gathering publications on this superfamily of receptors under one umbrella would provide an invaluable resource for a broad assemblage of scientists in the field; thus the idea for a new journal, **Nuclear Receptor Research**, was born.

I am pleased to share with you that **Nuclear Receptor Research** is now a reality as an open access peer-reviewed journal devoted to publishing high-quality, original research and review articles covering all aspects of basic and clinical investigations involving members of the nuclear receptor superfamily. **Nuclear Receptor Research** has an editorial board comprised of a group of renowned scientists from around the world. Board members are committed to make **Nuclear Receptor Research** a vibrant forum showcasing global efforts in this ever-expanding area of research.

We believe that the impact and visibility of papers related to nuclear receptors will be significantly enhanced by appearing in a journal devoted exclusively to nuclear receptors. In addition, it is hoped that **Nuclear Receptor Research** will serve as a catalyst to encourage collaborative studies as well as to foster interdisciplinary initiatives within this expansive and dynamic field. For these reasons, I invite you to consider **Nuclear Receptor Research** (<http://www.agialpress.com/journals/nrr/>) as a vehicle to share your novel research findings as well as your vision for the future of nuclear receptor research with your colleagues around the world.

Mostafa Badr  
Editor-in-Chief  
**Nuclear Receptor Research**