

SHORT COMMUNICATION

Bulimia from the Perspective of Persian Medicine (PM)

Abstract

Eating disorders are debilitating, life-threatening, and costly mental disorders that significantly impair physical health and adversely affect psychosocial functioning. Nowadays, six main feeding and eating disorders are identified in diagnostic systems, and Bulimia nervosa is one of them. The aim of this paper is twofold: First, it seeks to shed light on the concept of bulimia as understood by the Persian school of medicine. This study has attempted to consider the roots of this disease within this tradition. It will compare the concept of bulimia nervosa in conventional medicine with that of Canine appetite disease in Persian medicine in the Islamic Golden Era (9th-12th centuries). Secondly, it will analyze and show the evolution of the term bulimia throughout history. For this purpose, Avicenna's Canon of Medicine, primary PM resources, and important databases were reviewed using the related keywords. Although these diseases are in the category of emerging mental illness, evidence suggests that its roots can be found in Persian medicine. The comparison made between the definition of Canine appetite in this school and modern definitions of Bulimia nervosa shows striking similarities between the two diseases, suggesting that both are the same disease.

Key words: Bulimia Nervosa, Eating Disorders, Persian Medicine, History of Medicine

Received: 12 Dec 2023; Accepted: 5 Aug 2024; Online published: 1 Nov 2024
Research on History of Medicine/ 2024 Nov; 13(4): 305-310.

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Citation:

Nojavan, F., Tajik, N., 2024. Bulimia from the Perspective of Persian Medicine (PM). *Res Hist Med*, 13(4), pp. 305-310. doi: 10.30476/RHM.2024.50477.



Introduction

Over the past two decades, significant research has been conducted on eating disorders following the introduction of the International Classification of Diseases, Tenth Revision (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). Eating disorders, which have been on the rise for the past 50 years, are severe mental health conditions that significantly impact physical health and social functioning. Distorted attitudes towards body shape and weight often play a central role in the development and persistence of these disorders. (Erzegovesi, and Bellodi, 2016, pp. 304-309; Treasure, Duarte, and Schmidt, 2020, pp. 899-911.)

Six central feeding and eating disorders are now recognized in diagnostic systems: anorexia nervosa, bulimia nervosa, binge eating disorder, avoidant-restrictive food intake disorder, pica, and rumination disorder. Unlike other psychiatric disorders that do not inherently manifest with somatic complications, eating disorders are multisystem diseases with significant medical complications affecting all body systems (Mitchell, and Crow, 2006, pp. 438-43).

Among the eating disorders, anorexia nervosa and bulimia nervosa are the most important eating disorders and necessitate immediate medical attention for effective treatment (Shayeghian, Aguilar-Vafaie, and Tabatabae, 2011, pp. 30-38).

Both of them are serious psychiatric diseases with significant complications and mortality rates. Much of the increased mortality observed in those suffering from these eating disorders is attributable to the medical complications inherent to these two diseases (Westmoreland, Krantz, and Mehler, 2016, pp. 30-37.).

Gerald Russell was a British psychiatrist who described Bulimia nervosa in 1979 for the first time as a “chronic phase of anorexia nervosa”. In his description, patients had a pattern of overeating followed by the use of compensatory mechanisms, such as self-induced vomiting, laxatives, or prolonged periods of starvation (Castillo, and Weiselberg, 2017, pp. 85-94).

Bulimia, as a diagnostic entity, first appeared in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM), published in 1980. However, at that time, bulimia was defined by the presence of binge eating behavior. It wasn't until the revised edition (DSM-III-R) in 1987 that the term “*bulimia nervosa*” was introduced. He defined the disorder more in keeping with Russell's original description of binge eating accompanied by compensatory behaviors. The term “*Nervosa*” was added due to the psychiatric and distressing nature of the condition, as seen in those with anorexia nervosa. The characterization of bulimia nervosa continues to evolve, with the most recent updates provided in the DSM-5, published in 2013 (Castillo, and Weiselberg, 2017, pp. 85-94).

Interestingly, while bulimia nervosa may seem like a recent concept in medical science, historical documents suggest that a similar condition, referred to as “Canine appetite,” was documented in Persian medicine manuscripts. This paper aims to explore the historical roots of bulimia as described in Persian medicine during the Islamic Golden Era (9th-12th centuries) and to draw comparisons with the current understanding of bulimia nervosa in conventional medicine. Additionally, it seeks to analyze the evolution of the term “*bulimia*” throughout history.



Methods

In this narrative review, credible books of PM published between the 9th-19th centuries AD, including *Al Havi fi Al-Teb* and *Al Mansori*(Raziss), *Kamil al-Sana'ah al-Tibbiyyah* (Ali ibn al-'Abbas al-Majusi), *Canon of Medicine* (Avicenna), *A Guide to Medical Learners* (Hidayatal-Muta'allemin Fi al-Tibb; Al-Akhawyni), were examined extensively. The study aimed to explore the term '*bulimia*', Canine appetite (*Joe alkali*), and other equivalents in both Persian and Arabic languages. In addition, medical databases, PubMed, ScienceDirect, Scopus, and Google Scholar, were searched for the terms '*tonsils*' and '*history*' to gather relevant data. Published data were collected, and modern and traditional information was analyzed and compared.

The Concept of Bulimia Throughout History

The term "*bulimia*" originates from the Greek word *boulimos* or *boulimia*, derived by combining the word *limos* (hunger) with the intensifying prefix *bou* or *bous* (meaning bull, ox, cattle) (Ziolko, and Schrader, 1985, pp. 231-258).

Bulimia appeared by Aristophanes for the first time (450-385 BC) in the (vulgar) sense of extreme hunger in the 4th century BC. There was no consistent definition of this disease in ancient Greece, and the various definitions of Galen (2nd century), which attributed a kaleidoscopic spectrum to the symptomatology, made the situation even more confusing. Oribasius of Pergamon identified a variant of bulimia in the 4th century. He characterized the disease as an initial presence of hunger. (Ziolko, 1996, pp. 345-358).

Beginning in 1000 AD, the meaning of *boulimos* was documented by Constantinus Africanus (a representative of the Salerno school (11th century)) from Salerno Medical School (10th-11th ~enturies) and gained popularity as a constant insatiable, inordinately great, immeasurable hunger (Ziolko, 1996, pp. 345-358). He was the first person to translate Arabic medical texts into Latin.

By examining Persian medicine and searching for this term in the books from the Islamic Golden Era (9th-12th centuries), we encountered a disease called **boulimos**. Although similar in name to modern-day bulimia, their definitions differ. Another disease resembling the modern definition of bulimia in Persian medicine is known as "canine appetite" (**Joe alkali**). This shift in terminology seems to have occurred after translating Arabic works into Latin.

Persian Medicine

The history of Persian medicine schools can be traced back to ancient times before Islam (the beginning of history until 637 AD) and the Islamic period.(Soleymani, et al., 2020, pp. 450-452). The school of Persian medicine touches on many elegant points that may seem impossible within the region of modern medicine. In addition to shedding light on a variety of possible theoretical disorders in modern medicine, this ancient medical practice serves as a rich source of potential treatment options. (Sahraian, et al., 2018, pp. 385-391).

Persian scientists seemed to expand humourism, which was the Background for becoming a universal field of medicine in the ancient and medieval ages (Soleymani, et al., 2020, pp. 450-452).

The paradigm of humourism posited a holistic view of the body based on four tempera-



ments (Mizaj), known as blood (dam), phlegm (balgham), yellow bile (safra), and black bile (soda).

Medical science made remarkable advancements by the contributions of Persian scientists such as Rhazes (865-925 CE), Haly Abbas (949-982 CE), Avicenna (980-1037 CE), and Jorjani (1042-1137 CE) in medieval times. From the 11th to 17th centuries AD, the scientific and educational activities of medicine in the world moved on the axis of Avicenna's medicine or were strongly influenced by his teachings, which were very influential on medicine in the world (Mousavi, 2009, pp. 3-8).

After reviewing the books of prominent Persian physicians (Table 1), we can see that they all described canine appetite as a physical illness. They also stated various reasons for the development of this disease.

Table 1: A short introduction of prominent Persian physicians reviewed in this study

| Book name | English/ Latin name | Author | Compilation century | book's subject |
|--|-----------------------------------|--------------|--------------------------|----------------|
| <i>Al-Hawi fi al-Tibb/</i> | <i>Liber continens</i> | Rhazes | 10 th century | Medicine |
| <i>Mansuri fi Teb</i> | <i>Liber Almansur</i> | Rhazes | 10 th century | Medicine |
| <i>Hidayat al-Muta' allemin fi al-Tibb</i> | <i>Guidance to medical pupils</i> | Al-Akhawayni | 10 th century | Medicine |
| <i>Kamil al-Sinaa al-Tibbiya (Al-Maliki)</i> | <i>The Royal Book</i> | Haly Abbas | 10 th century | Medicine |
| <i>Al-Qanoon fi al-Tibb</i> | <i>Canon of medicine</i> | Avicenna | 11 th century | Medicine |

The Description and Treatment of Canine Appetite (*Joe alkalb*) in Persian Medicine Manuscripts

In Persian medicine, Canine appetite (*Joe alkalb*) describes a condition in which the person overeats, followed by vomiting. Then, the individual would continue to seek food. This resembles the dog's behavior eating excessively and then vomiting, and after vomiting, it asks for food again (Al-Akhawyni, 1992, p. 370).

According to the definition of this disease found in Persian medical texts, Canine appetite is characterized by an abnormal appetite. A person who consumes excessive amounts of food still feels hungry after overeating. That is to say, despite their full stomach, they do not experience a sense of satiety, leading to a persistent desire for more food. Finally, they must vomit or excrete through feces.(Ahvazi, 2009, p. 432; Al-Razi, 1988, p. 231) Persian medicine has many reasons for this disease. According to the humor view, one reason was humor in the stomach and brain. In addition to internal factors, external elements such as extreme cold or hot weather were also assumed to play a role in the development of Canine appetite.

Various methods have been provided in the treatment field, including food treatment. (Avicenna, 1426, p. 123). Nutrition has a crucial role in maintaining body health. Eating and drinking have a special place in Persian medicine. (Hamedi, et al., 2013, pp. 1208-1218). Always the first therapeutic solution of Persian medicine is through food. Another treatment method is complementary treatments such as water therapy, as the literature suggests. Persian medicine uses water and baths to treat many diseases. In this disease, for one model, the physician advised the patient to take a shower with cold water (Avicenna, 1426, p. 123).

Although some Persian medicine explanations for the etiology of Canine appetite are based on humoral theories and cannot be described using current medical concepts, most of the definitions and symptomatic descriptions found in Persian texts align well with modern explanations of Bulimia nervosa

Conclusion

With its ancient history and cultural heritage, Iran has played a significant role in advancing medicine. Many physicians whose names and books are shining forever worked in this school, and their manuscripts remain relevant today. They created new medical methods that have been the medical reference for hundreds of years (Nikbakht, and Kafi, 2004, pp. 255-258). Because eating disorders are less investigated, there is much uncertainty about their pathophysiology, treatment, and management. Future challenges, emerging therapies, and outstanding research questions are discussed (Treasure, Duarte, and Schmidt, 2020, pp. 899-911). Given the complexities and gaps in knowledge that persist within the field of eating disorders, complementary medicine may be of great help in the treatment of such diseases.

Comparing the definition of Canine appetite in this school with current definitions of Bulimia nervosa shows great similarities between the two conditions. It seems that both are the same disease. According to the history of Persian medicine and the provision of various low-risk treatment methods for this disease, respected researchers should conduct in-depth studies and clinical trials.

On the other hand, the translated text is often disconnected from the original content, generating disputes and misconceptions that can be instructive or ad hoc justifications for perpetuating erroneous information.

Written language, which encapsulates the essence of oral communication, serves as a conduit for preserving historical insights. Each word, especially a technical term, reflects its historical origin and cultural context. Over centuries, translation has facilitated the exchange of technical and scientific knowledge across languages. However, translation is not merely a mechanical transfer of words from one language to another. Instead, translation profoundly influences medical knowledge by altering its language and substance. This sometimes leads to disagreements that either enrich understanding or serve as rationalizations for maintaining divergent interpretations.

Authors' Contribution

The idea of the article was from Fatemeh Nowjavān, and the data was collected by Narges Tajik. Both authors contributed in writing the article.

Funding

None.

Conflict of Interest

None.

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