



A modern conceptualization of phobia in al-Balkhi's 9th century treatise: Sustenance of the Body and Soul



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ABSTRACT

Morbid fears and phobias have been mentioned in religious, philosophical and medical manuscripts since ancient times. Despite early insights by the Greeks, phobias did not appear as a separate clinical phenomenon in Western medicine until the 17th century and has evolved substantially since. However, robust investigations attempting to decipher the clinical nature of phobias emerged in pre-modern times during the oft-overlooked Islamic Golden Era (9th–12th centuries); which overlapped with Europe's medieval period. An innovative attempt was made by the 9th century Muslim scholar, Abu Zayd al-Balkhi, in his medical manuscript "Sustenance of the Body and Soul," to define phobias as a separate diagnostic entity. Al-Balkhi was one of the earliest to cluster psychological and physical symptoms of phobias under one category, "al-Fazaá", and outline a specific management plan. We analyze al-Balkhi's description of phobias, according to the modern understanding of psychiatric classifications and symptomatology as described in the DSM-5.

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1. Introduction

Definitions, descriptions and classifications of mental disorders have undergone decades of evolution and conceptual reorganization influenced by changing societal, cultural, and economic factors (Canino & Alegria, 2008; Kirmayer & Young, 1999; Lilienfeld & Marino, 1995). Knowledge of the history of psychological definitions and classifications is imperative for many reasons; it explains the understandings of psychological conditions that have remained stable versus those that have changed over time, the factors that affect these changes, and their implications to mental health care (Jones, Greene, Duffin, & Harley, 2014). History also teaches care providers to appreciate the cultural and societal roots that affect the perception of mental illness and hence understand the help seeking behaviors of individuals and populations (Jones et al., 2014).

The aim of this paper is twofold. Our first aim will be to shed light on the substantial progress and contributions made during the Islamic Golden Era (9th–12th centuries) in understanding mental disorders. This will be accomplished by bringing to light al-Balkhi's important work in defining and describing phobias. Our second aim will be to analyze al-Balkhi's manuscript in light of the DSM-5 and discuss its practical implications. In doing so, we also hope to under-

stand historical factors that may have influenced the perceptions of mental disorders in classical Islamic societies.

1.1. Phobias in antiquity

The term phobia is derived from the Greek term "phobos," which means panic, fear, and terror (Errera, 1962; Marks, 1970). Classifying phobias according to a feared situation is evidenced by the countless prefixes attached to the word phobia by the Greeks (Marks, 1970). For example, hydrophobia means fear of water or agoraphobia means fear of the marketplace. Furthermore, two of the earliest clinical descriptions of men who had excessive fears were mentioned in the Hippocratic corpus (Errera, 1962; Himmelhoch, Levine, & Gershon, 2001). It is imperative to note, however, that Greek physicians considered morbid fears and phobias to be part of a mental disorder they termed "melancholy" and not a stand-alone clinical disorder (Kasper, Den Boer, & Sitsen, 2003, pp. 1–7). Greek physicians also believed that melancholy was caused by the predominance of black bile. By the advent of the Roman era, Caelius Aurelianus, a Roman physician, grouped phobias with mania in his classifications (Errera, 1962).

In the period between the fifth and eighteenth centuries in Western Europe, descriptions of psychological manifestations of phobias emerged in the works of philosophers and theologians. However, phobias were not considered to be medical illnesses as

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evidenced by the scholarly works from this time period (Errera, 1962).

Modern-day historians of psychology maintain that it was not until the 18th century that the concept of phobias appeared in medical or psychiatric literature (Bienvenu, Wuyek, & Stein, 2009; Errera, 1962; Himmelhoch et al., 2001) as a stand-alone medical illness (Marks, 1970). In scholarly works from the 17th and 18th centuries the term phobia began to be used in describing intense fears out of proportion to the apparent stimulus. The understanding of phobias characteristic of this era was that they were a psychiatric illness, either stand-alone or part of a constellation of symptoms in a larger disorder, that afflicted individuals with unexplainable fears that then led them to avoid the feared stimulus (Marks, 1970). Currently, the DSM-5 views phobias as marked fear or anxiety related to a specific situation or object that is out of proportion to the actual danger of the object or situation. This intense fear is typically associated with an increase in physiological arousal, lasting more than six months and causes clinically significant distress in social, occupational or other important areas of life.

1.2. Phobia and fears in medical manuscripts during the Islamic Golden Era

During the heyday of Abbasid rule, 9th–12th centuries, Islamic societies witnessed an exponential surge in scientific productivity now referred to as the Islamic Golden Era (Ahmed & Amer, 2012; Falagas, Zarkadoulia, & Samonis, 2006; Friendly, 2008). Just at a time that the Islamic world was set to embark on its equivalent of the Renaissance, medieval Europe was descending into what is now termed the “Dark Ages” (pp. 205–206). In stark contrast to the Dark Ages, scientific inquiry and understanding under Abbasid rule evolved by leaps and bounds (Falagas et al., 2006). For example, Abbasid rulers built institutions, such as the House of Wisdom, where ancient medical texts were translated from Greek and Syriac into Arabic (Awaad & Ali, 2015; Majeed, 2005; Wallace & Gach, 2010, pp. 205–206). The purpose behind such institutions was to avail the medical knowledge of Greek and Roman predecessors to scholars, physicians and researchers living in the Muslim world. Once translated into Arabic, scholars of the Muslim world then advanced the medical science of the ancients by contributing their own clinical observations, experimentations, and innovative treatments (Awaad & Ali, 2015; Gorini, 2007; Graziani, 1980; Majeed, 2005; Tchamourov, 2006). Later, medical manuscripts from the Islamic Golden Era were translated from Arabic into Latin and likely reached Europe in this manner (Awaad & Ali, 2015; Husayn, 1970; Shanks & Al-Kalal, 1984).

The medical books of Galen and Hippocrates gained great fame among physicians of the Islamic world (Kasper et al., 2003, pp. 1–7; Youssef, Youssef, & Dening, 1996; Wallace & Gach, 2010, pp. 205–206). Hence, it is not surprising that Muslim scholars used the black bile theory as an explanatory model for many mental disorders. Similarly, morbid fears and phobias were described by most scholars during the Islamic Golden Era in the same manner as their Greek predecessors. Fears and phobias were either considered to be subjective psychological symptoms that constituted part of another syndrome, i.e., “melancholy,” or were listed as somatic symptoms of physical diseases, i.e., organ dysfunction.

An illustrative example is the description of morbid fears by Ibn Sina (980–1037), known in the West as Avicenna, in his famous medical encyclopedia *The Canon of Medicine* (Avicenna, 1877). According to Ibn Sina, fears of unknown origin could manifest as one of the symptoms of mild melancholy. However, if the melancholy was severe, the person was likely suffering from “al-Fazaá”; which translates into phobia or panic. He also noted that the phobias found in severe melancholy were usually unrealistic and of countless types. Furthermore, he explained that such phobias may

be associated with physical symptoms and could be confused with physical diseases. Moreover, Ibn Sina maintained that there was a relationship between one’s pulse and their psychological state. For example, if a phobia, “al-Fazaá”, comes on suddenly, it is associated with a fast, irregular pulse. If “al-Fazaá” comes more gradually, however, then the pulse is similar to that of “al-Gham” (sadness); which is slow, weak and variable. In another section of *The Canon of Medicine*, Ibn Sina attributed excessive fears as a symptom of a neurological disorder he termed “al-Ra’sha,” or body shaking.

Similar to Ibn Sina’s understanding of phobias, Ar-Razi (865–925) and Najib al-Din al-Samarqandi (1097) in their books, “al-Hawi” (Husayn & al-’Uqbi–, 1977) and “al-Asbab wa al-’Alamat” (Al-Samarqandi, 1222), respectively, viewed phobias as the psychological manifestation of melancholy. Aligning himself with Ibn Sina’s second opinion, Thabit ibn Qurrah Al Harrani (836–901) in his medical encyclopedia “al-Dhakhirah” described “al-Fazaá” as an underlying etiology to the neurological disorder called “al-Ra’sha,” body shaking (Kurdi, 2010).

To our knowledge, morbid fears and phobias were not described as a separate diagnostic entity in the most famous of the medical manuscripts of the Muslim world. However, an exception to this general rule is the 9th century medical manuscript, “Masalih al-Abdan wa al-Anfus” (Sustenance of the Body and Soul) authored by the Muslim scholar Abu Zayd al-Balkhi, in which he dedicated an entire chapter on classifying, diagnosing and treating “al-Fazaá” in a manner very similar to the modern understanding of phobias.

2. Al-Balkhi’s manuscript “Sustenance of the Body and Soul” and his description of phobias

Abu Zayd Ahmed ibn Sahl al-Balkhi was an encyclopedic Muslim scholar from Khorasan who lived in the late 9th century (al-Balkhi, Misri, & al-Hayyat, 2005; al-Balkhi–, Badri–, & ‘Ashwi–, 2003; Awaad & Ali, 2015). Historically, Khorasan referred to the region between India and Iraq and was part of the Islamic empire during al-Balkhi’s lifetime. Al-Balkhi was not a practicing physician (al-Balkhi et al., 2005; Awaad & Ali, 2015); rather, he excelled in theoretical medicine.

Penned in the Arabic language, his manuscript, “Masalih al-Abdan wa al-Anfus,” translates into “Sustenance of the Body and Soul.” The word “Abdan” in Arabic is the plural of the word “Badn” which means body. The word “Anfus” is the plural of the word “Nafs” and means soul. Our analysis of al-Balkhi’s work is based on his original Arabic manuscript found in the book bearing the name, *Masālih al-Abdān wa al-Anfus*, which was reproduced by al-Balkhi et al. (2005) and published by “The Institute of Arabic Manuscripts” (Ma’ had al-Makhtūtāt al-‘ Arabīyah)/World Health Organization. The same original Arabic manuscript was also found in the reproduction by Balkhi–, Sezgin, & Süleymaniye Umumî Kütüphanesi (1998) under the same title.

Al-Balkhi’s book is composed of two sections. The first section “Masalih al-Abdan” is focused on physical health maintenance, while the second “Masalih al-Anfus” is dedicated to mental health. The section on “Masalih al-Anfus” is further subdivided into eight chapters, covering different mental health topics, such as the definition of mental health, the importance of mental health science, and the prevention of mental health disorders. In the last five chapters, al-Balkhi discusses classification of mental disorders and provides suggested treatment modalities.

In chapter six and parts of chapter four, al-Balkhi defines and describes a stand-alone psychological disorder he terms “al-Fazaá”. By comparing his description of this disorder to the descriptions of anxiety disorders found in DSM-5, “al-Fazaá” very closely matches the criteria for specific phobias. Al-Balkhi describes “al-Fazaá” as an excessive fear that results from seeing, hearing or thinking of

Table 1
A comparison between the DSM-5Criteria for specific phobias and al-Balkhi's criteria for "al-Fazaa".

DSM-5	Al-Balkhi
<p>Diagnostic features</p> <p>1. A key feature of specific phobia is that the fear or anxiety is circumscribed to the presence of a particular situation or object</p> <p>2. To meet the criteria for a diagnosis, the fear or anxiety must be intense or severe</p> <p>3. The amount of fear experienced may vary with proximity to the feared object or situation and may occur in anticipation of or in the actual presence of the object or situation</p> <p>4. Many individuals fear objects or situations from more than one category, or phobic stimulus. For the diagnosis of specific phobia, the response must differ from normal, transient fears that commonly occur in the population</p> <p>5. Fear or anxiety may take the form of a full or limited symptom panic attack (i.e., expected panic attack)</p> <p>a) Trembling or shaking</p> <p>b) Chills or heat sensations</p> <p>c) Fear of losing control or "going crazy"</p> <p>d) Symptoms that indicates sympathetic over activity: Palpitations, pounding heart, or accelerated heart rate- Sweating- Feeling dizzy, unsteady, light-headed, or faint</p> <p>e) Physical symptoms may be in the form of: Chest pain or discomfort, Feelings of choking, Nausea or abdominal distress, Sensations of shortness of breath or smothering</p> <p>6. Fear and anxiety are often expressed differently between children and adults</p> <p>Features supporting the diagnosis:</p> <p>The physiological response to the feared situation or object varies. Some are likely to show sympathetic nervous system arousal while others demonstrate vasovagal fainting</p> <p>Prevalence</p> <p>Prevalence rates are approximately 5% in children (and are approximately 16% in 13 to 17-year-olds.) Prevalence rates are lower in older individuals (about 3–5%). Females are more frequently affected than males, at a rate of approximately 2:1</p> <p>Risk factors</p> <p>Temperamental</p> <p>Temperamental risk factors for specific phobia, such as negative affectivity (neuroticism) or behavioral inhibition, are risk factors for other anxiety disorders as well</p> <p>Environmental risk factors</p> <p>Environmental risk factors for specific phobias, such as parental overprotectiveness, parental loss and separation, and physical and sexual abuse, tend to predict other anxiety disorders as well</p> <p>As noted earlier, negative or traumatic encounters with the feared object or situation sometimes (but not always) precede the development of specific phobia</p>	<p>1. "al-Fazaá" results from seeing, hearing or thinking of a fearful situation or object</p> <p>2. To meet the criteria for diagnosis, the fear must be excessive</p> <p>3. The feared situation or object is located in close proximity or is expected to happen in the near future</p> <p>4. There are differences among situations or objects that elicit normal fear and those that evoke a phobic response. For example, fear of losing money or losing an authoritative job elicits normal fear responses. On the other hand, anticipation of pain, sufferings and distressful events that may happen in the near future evokes phobic responses</p> <p>5. Fear may become intense and the person suffers from the following symptoms</p> <p>a) Trembling of the hands and feet, and loss of function</p> <p>b) The body feels hot or cold</p> <p>c) Astonishment and confusion to the extent that the person is unable to make decisions and escape the fearful situation</p> <p>d) Pale skin (due to the escape of blood from external to internal parts of the body)</p> <p>e) Development of serious physical symptoms or illnesses because the body is in state of imbalance</p> <p>6. The intensity of fears and anxiety differs among children, women and men. Some people have weaker temperaments than others that make them more susceptible to fear and phobias</p> <p>People have different temperaments that cause them to react differently to fears and phobias. Some experience panic and anxiety when faced by the phobic stimulus while others react by escape and avoidance</p> <p>Fear and phobia are expressed differently among children, women and men. Children and women are more susceptible to fears and phobias</p> <p>Some people have stronger temperaments and resist fear when they are faced with sudden fearful stimulus. Others are more sensitive and panic when they experience new or fearful situations</p> <p>The fearful sound of thunder, hurricanes, earthquakes and the sight of injured or dead people cause anxiety and may predispose a person to phobias</p>

a feared situation or object. "Al-Fazaá" happens when the feared situation or object is located in close proximity or is expected to happen in the near future, leading one to fear personal injury or pain. A comparison between the criteria for specific phobia in DSM-5 and "al-Fazaa" in al-Balkhi's manuscript can be found in Table 1.

It is clear from al-Balkhi's description, that unlike his contemporaries, he viewed phobia as a psychological disorder that may manifest with physical symptoms (e.g., paleness of the skin, trembling of the hands). This is quite an accomplishment considering that the physical symptoms of phobias were mistakenly grouped under physical rubrics in medical textbooks and were not believed to be associated with phobias until the 19th century (Berrios, 1999). Although his comment on the susceptibility of children to phobia might not be exactly similar to what is reported in the DSM, his concept of variability in the intensity of phobia according to age and gender is clever and shows that he was a keen observer.

Despite the novelty of al-Balkhi's work, it is difficult to clearly establish the influence of his theories of mental health disorders on his contemporaries and on the scholars who followed. In examining

the most famous medical treatises written by al-Balkhi's contemporaries or within the three centuries that followed, one finds that the style of writing, classifying, and conceptualizing illnesses and their treatments clearly differed from that of al-Balkhi. Certainly, none of these texts describe fears or phobias in as much depth or with as much clarity as al-Balkhi's manuscript; Sustenance of the Body and Soul. As discussed earlier, the topic of phobia in the texts of al-Razi, Ibn Sina, Thabit ibn Qurrah Al Harrani and al-Samarqandi was discussed as either a symptom of melancholy or as part of "al-Ra'sha," body shaking disorder. Likewise, treatments recommended for phobias were largely different. Al-Balkhi was a proponent of behavioral therapy (al-Balkhi– et al., 2003), while Ibn Sina, al-Samarqandi and other physicians who understood phobia to be a symptom of melancholy, focused on medications, ointments, and bloodletting.

It seems likely, then, that if al-Balkhi's works reached his contemporaries or successors, his theories did not resonate strongly with them. Al-Balkhi's theories, despite their revolutionary approach, did not lead to major breakthroughs in the medical

practice of the Islamic Golden Era. Hence, his work also did not exert a clearly discernable impact on contemporary conceptualizations of phobias or anxiety disorders and was largely lost to Western civilization. Nearly a millennium later, however, al-Balkhi's innovative work can be clearly recognized as groundbreaking for its time.

2.1. Psychotherapy for phobias according to al-Balkhi

Unlike his predecessors and contemporaries who considered phobias to be a symptom of melancholy and hence treated by medications, bloodletting and ointments, al-Balkhi proposed treatment for phobias was entirely based on behavior and thought management. The therapeutic techniques described by al-Balkhi are quite similar to contemporary behavioral therapies (al-Balkhi et al., 2005; al-Balkhi et al., 2003). In several sections of his manuscript, al-Balkhi encouraged the person experiencing phobias to gradually train his senses and "nafs" (psyche) by incremental exposure to the feared object. He recommended that this incremental exposure take place by gradually looking at or listening to the feared object. Al-Balkhi called this treatment approach, "reyadat al-nafs" which means training of the psyche.

To convince his readers of the benefits this kind of gradual exposure technique could afford, al-Balkhi provided simple real life examples in his manuscript. One such example was of a sailor who was frightened when faced by storms early in his sailing career. However, after sailing for many years, he no longer panicked at the sight of large waves and storms. Al-Balkhi further explained that his gradual exposure training is a well-known approach used when training animals, such as horses. Animals that are afraid of certain objects are forced to see these objects several times until they become accustomed to them. The description of al-Balkhi's gradual exposure technique echoes the modern-day technique known as systemic desensitization in Exposure Therapy (al-Balkhi et al., 2005; al-Balkhi et al., 2003) in which the patient learns anxiety coping techniques and then is gradually exposed to the anxiety stimulus.

Al-Balkhi's manuscript can also be analyzed in light of Cognitive Behavioral Therapy (CBT), which emphasizes the importance of beliefs in shaping people's emotions and reactions to their environments (al-Balkhi et al., 2003). Cognitive-Behavioral therapists work off the premise that the majority of unhealthy thoughts in psychological disorders are irrational and unreal. In the same way, al-Balkhi mentioned that most of the fears that cause an afflicted person distress are not real and are very unlikely to happen in the future. Furthermore, al-Balkhi provided the following example to illustrate that experiencing a fearful event is less distressful than anticipating it: "Fears are like the fog. At first glance, it appears to be a nonporous solid barrier. But when a person walks through it, he will realize that it is made of air and it is not as frightening as it seems."

Al-Balkhi's also stressed on the importance of eliciting pleasant feelings and bringing happiness to the anxious person. This concept is also echoed in the current therapeutic technique introduced by Wolpe in the 1950's termed "reciprocal inhibition" that elicits a pleasant feeling or response in order to inhibit one's fears (al-Balkhi et al., 2003).

3. Conclusion

Although the concept of phobia was known since antiquity, al-Balkhi was one of the earliest to consider it a separate diagnostic entity. He was likely also one of the earliest to explain that although phobias are a primary psychological disorder, they may manifest with physical symptoms. As previously illustrated in the table, the majority of the modern diagnostic features of Specific Phobias

match the description of "al-Fazaá" found in al-Balkhi's manuscript. Furthermore, this finding may reveal transcultural diagnostic consistency over many centuries of the disorder we today call Specific Phobias.

Despite the fact that definitions and diagnoses of mental disorders are largely shaped by societal views of normality and abnormality, some core symptoms of mental disorders are likely to present similarly among different communities (Murphy, 1976; Kirmayer, 2006). Al-Balkhi's manuscript provides evidence for the relative stability of the core symptoms of phobias, particularly Specific Phobias, over time and across cultures. The manuscript also highlights the influence of culture on remedies for mental illnesses as witnessed in al-Balkhi's choice of examples for behavioral therapy (e.g., seasoned sailor overcoming his fears or likening gradual exposure therapy to similar techniques used in training horses) that reflected the lifestyles and may have resonated with his audience. This culturally sensitive approach echoes the appeal found in contemporary works that insist on the importance of paying close attention to cultural nuances in diagnosing and treating mental illnesses (Kirmayer, 2006; Kleinman, 1977, 1987).

Al-Balkhi's work also brings to light other important considerations that may change the understanding of the history of mental health disorders. The fact that al-Balkhi proposed that phobias were a primary psychological condition and advanced a management plan so similar to the treatments used today clearly indicates the great advancements in the understanding of mental disorders during the Islamic Golden Era. Furthermore, al-Balkhi's work dispels the myth that mental disorder during the 9th–12th centuries of Islamic history relied upon supernatural explanations similar to those that were widespread in Europe during the same era. In contrast, al-Balkhi's treatment approach was based on scientific inquiry and was much more humane; focusing on thoughts and beliefs as a driving force for behaviors and emotions. Al-Balkhi's precocious genius further illustrates the advanced intellectual evolution to the field of medicine, in general, and to the field of mental health in particular.

Conflict of interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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