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# Full Length Review Article

# A STUDY OF EFFECTS OF IZTERAB-E-NAFSANI (ANXIETY) AND ITS MANAGEMENT WITH REFERENCE TO UNANI SYSTEM OF MEDICINE: A REVIEW

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### **ABSTRACT**

I chose this topic for the study about Izterab-e-Nafsani (anxiety) to make people aware about it as people usually think that it is an abnormal condition of the body. In fact, anxiety is a feeling that is necessary in order for human beings to live, whether they like it or not. There are both positive and negative effects of anxiety. Positive anxiety effects include alerting human beings of danger, motivating them to action, and physically preparing the body to fight or escape. The negative effects of anxiety include palpitation, irritability, poor concentration, memory loss and insomnia. Unani system of medicine is a very rich system in view of concepts and literature. According to Unani concept, it belongs to Infialat-e-Nafsaniyah (psychic reactions). Thus it may help in the identification of Mizaj (temperament) of an individual. In case of abnormal or pathological anxiety that becomes unbearable and harmful to healthcan be treated by psychotherapy, diet therapy or pharmacotherapy singly or in combination.

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### INTRODUCTION

The second part of the 20<sup>th</sup> century has been variously designated as "age of anxiety" or "age of stress". Anxiety and stress are universal human experiences, intrinsic to human condition, and the nature of the specific environmental stimuli evoking anxiety and stress emotions has changed remarkably over the year (Gaudry et al., 1971). Anxiety (Izterab-e-Nafsani) is a psychological and physiological state characterized by somatic, cognitive, emotional behavioural components. These components combine to create the feelings that typically recognize as apprehension or worry. It is considered to be a normal reaction (Sarason et al., 1990). Every one sometimes in his life experiences anxiety in one form or the other and in varying degrees. Anxiety is not always a problem but it also plays some beneficial role for us. It is an alerting signal; it warns off impending danger and enables the person to take the measures to deal with a threat. When anxiety becomes excessive, it may fall under the classification of anxiety disorder and causes problem for a person.

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The intensity and reasoning behind anxiety determines whether it is considered a normal or abnormal reaction. (Viyas et al., 2008) From the point of view of Unani Medicine, anxiety comes under the Infialat-e-Nafsaniyah (Psychic Reactions). Terminologically Infialat-e-Nafsaniyah are the movements of ruh (pneuma) and blood with the help of Ouwwat-e-Haiwaniyah (vital faculty). (Kabiruddin, 1954) Therefore, it is one of the indicators of *miza*i (temperament) and guide us in the assessment of temperament for instances individuals having phlegmatic temperament are considered as mentally dull who show slower rate of Infialat-e-Nafsanivah in comparison to bilious individuals. (Kabeeruddin, 1930)

# **Anxiety: Meaning and Types**

The term *Izterab* is used for anxiety in Arabic and Unani Texts and the word Nafsani is added to Izterab to specify its psychological state. Literally Izterab-e-Nafsani stands for worry, excessive thinking and fear. It is also used in the sense of hindrance in routine work. (Ali, 1916 and Baalabaki, 2001). In the literature of Unani system of Medicine, there is no description of Izterab-e-Nafsani but there is description of Fikr (worry) which is used as synonym of anxiety. According to Unani System of Medicine, *Fikr* is a psychological reaction in which the *Ruh-e-Haiwaniyah* moves from outside to inside slowly resulting in coldness outside which can be felt easily (Kabeeruddin, 1930 and Tabri, 1997). In modern science, the root meaning of the word anxiety is "to vex or trouble"; in either of the absence or presence of psychological stress. Anxiety can create feeling of worry, fear, uneasiness and dread. (Bouras and Holt, 2007) Anxiety can be defined as a specific emotion necessary for an individual to prepare himself for potential danger about threatening situations. Many researchers found that anxiety is still unclear and not easy to define in simple sentences.

Spielberger (1983:1) defined anxiety as:

"The subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system". (Spielberger, 1983: 1, cited in Brown, 2007).

Mussen et al (1974) concluded that:

"Anxiety is not a pathological condition in itself but a necessary and normal physiological and mental preparation for danger. Anxiety is necessary for the survival of the individual under certain circumstances. Failure to apprehend danger and to prepare for it may have disastrous results" (Mussen *et al*, 1956: 387)

### **Types of Anxiety**

Some authors classify the anxiety into the following types:

### **Trait Anxiety**

According to Spielberger *et al* (2005) trait anxiety is a general characteristic of an individual's personality. People who develop a more anxiety-trait are much more prone to reacting to a large level of stimuli, and will be more able to worry in less dangerous and hard situations and is exemplified by 'I often feel anxious'.(Ahuja, 2006)

### **State Anxiety**

This is the anxiety felt at the present, cross sectional moment (state) and is exemplified by 'I feel anxious now'. Persons with trait anxiety often have episodes of state anxiety. (Ahuja, 2006)

### **General Anxiety**

It is a more comprehensive construct that refers to the phenomenological, physiological and behavioural responses that may accompany any event in which the individual perceives that he or she may be unable to deal easily and satisfactorily. Evaluative anxiety is a form of general anxiety.(Ahuja, 2006)

### **Test and Performance Anxiety**

Test anxiety is the set of phenomenological, physiological and behavioural responses that accompany concern about possible failures in any testing or evaluative situation. According to Yerkes-Dodson law, an optimal level of arousal is necessary to best complete a task such as an exam, performance, or competitive event. However, when the anxiety or level of arousal exceeds that optimum, the result is a decline in performance. (Liebert *et al.*, 1967 and Teigen *et al.*, 1994)

### Stranger and Social anxiety

Humans generally require social acceptance and thus sometimes dread the disapproval of others. Apprehension of being judged by others may cause anxiety in social environments. Anxiety during social interactions, particularly between strangers, is common among young people. It may persist into adulthood and become social anxiety or social phobia. (Hofmann *et al.*, 2010)

### **Choice or Decision Anxiety**

It is the Anxiety which is induced by the need to choose between similar options. It is increasingly being recognized as a problem for individuals and for organizations. In a decision context, unpredictability or uncertainty may trigger emotional responses in anxious individuals that systematically alter decision-making. There are primarily two forms of this anxiety type. The first form refers to a choice in which there are multiple potential outcomes with known or calculable probabilities. The second form refers to the uncertainty and ambiguity related to a decision context in which there are multiple possible outcomes with unknown probabilities. (Hartley and Catherine, 2012)

**Pathological anxiety**: Pathological anxiety is an inappropriate response to a given stimulus by virtue of either its intensity or duration. The complete absence of anxiety is just the pathological as excessive anxiety.(Ahuja, 2006)

### Regulation of Anxiety

According to Unani System of Medicine, anxiety is controlled by *Quwwat-e-Mutafakkirah* (faculty of thinking) which belongs to *Quwa-e-Mudrika Batinah* (internal perceptive faculties) of *Quwwat-e-Nafsaniyah* (psychic faculty) (Ahmad, 1980; Ali, 1916; Ibn Sina, 1998; Kabeeruddin, 2001 and Kabeeruddin, 1930). On the basis of physiological functions, Unani physicians have divided the brain into three functional areas i.e. *Muqaddam Dimagh* (fore brain), *AusatDimagh* (mid brain) and *Moakhkhar Dimagh* (hind brain). Eacharea is associated with particular *Quwa* (faculties). *Quwwat-e-Mutafakkirah* is found in *Ausat Dimagh* (Ahmad, 1980; Grunner, 1930; Ibn Rushd, 1984; Jurjāni, 1896; Kabeeruddin, 2001; Khan, 2003 and Majoosi, 2010). A famous Arabic philosopher and physician Ibn-e-Rushd supports the division of brain in his famous book *Kitab-ul-Kulliyat* as:

"If a disease occurs in whole brain all three faculties with their functions becomes defective. If disease limits to a specific area of brain, the defect will occur in that particular faculty only e.g. minor pathology in the mid brain may cause defect in *Quwwat-e-Mutafakkirah* which results in severe complications such as exaggerated thinking and mental disturbances which make the brain unable to have a proper and specific decision" (Ibn Rushd, 1984). According to modern science, limbic system is concerned with the regulation of autonomic and endocrine function, particularly in response to emotional

stimuli. Areas that are typically included in the limbic system fall into two categories. Some of these are subcortical structures, while many are portions of the cerebral cortex. Cortical regions that are involved in the limbic system include the hippocampus as well as areas of neocortex including the insular cortex, orbital frontal cortex, subcallosal gyrus, cingulate gyrus and parahippocampal gyrus. This cortex has been termed the "limbic lobe" because it makes a rim surrounding the corpus callosum, following the lateral ventricle. Subcortical portions of the limbic system include the olfactory bulb, hypothalamus, amygdala, septal nuclei and some thalamic nuclei, including the anterior nucleus and possibly the dorsomedial nucleus. (Guyton C. Hall, 1996) One way in which the limbic system has been conceptualized is the "feeling and reacting brain" that is interposed between the "thinking brain" and the output mechanisms of the nervous system. In this context, the limbic system is usually under control of the "thinking brain" but obviously can react on its own. Additionally, the limbic system has its input and processing side (the limbic cortex, amygdala hippocampus) and an output side (the septal nuclei and hypothalamus). (Guyton C. Hall, 1996)

The part of limbic system which is related to anxiety is amygdala. The amygdala is an important structure located in the anterior temporal lobe within the uncus. The amygdala makes reciprocal connections with many brain regions including the thalamus, hypothalamus, septal nuclei, orbital cortex. cingulate gyrus, hippocampus, parahippocampal gyrus, and brain stem. The olfactory bulb is the only area that makes input to the amygdala and does not receive reciprocal projections from the amygdala. The amygdala is a critical center for coordinating behavioural, autonomic and endocrine responses to environmental stimuli, especially those with emotional content. It is important to the coordinated responses to stress and integrates many behavioural reactions involved in the survival of the individual or of the species, particularly to stress and anxiety. (Koscik et al., 2011)

### Beneficial Effects of Anxiety (Viyas et al., 2008)

Generally it is thought that anxiety is an abnormal condition and harmful for us but it is not true, it may also be normal as described earlier and it performs some beneficial functions for us. Some of the beneficial effects of anxiety are as follows:

### **Alerts Us to Danger**

The "fight or flight" response is adaptive. Whether in an encounter with a sabre-toothed tiger in prehistoric times, or in a darkened alley today, this response protects us by pumping important biochemicals through our body needed to escape truly dangerous situations or fight if we need to.

### Improves Self-Knowledge and Awareness

Anxiety can alert us to things we need to change in our lives, or about ourselves. If anxiety arises repeatedly around a certain topic, it is often a sign that we need to take a closer look. It may continue to pester us until we take action.

### Increases Motivation, Purpose and Quality of Life

Because it can feel so awful, anxiety can be the catalyst that causes us to do something meaningful about ourselves and

aspects of our lives that we are not happy with. It usually takes a significant amount of suffering before we will make major changes like starting a meditation practice or quitting drinking, and our life is often the better for it.

#### **Improves Confidence**

We realize our strength when we learn to move through it effectively. When we are in the throes of anxiety, we can think that it will kill us. It is common for people to arrive at a hospital emergency department thinking that they are having a heart attack when, after a medical workup, no physical cause can be found. What we do not realize when we are in the thick of it is that bouts of anxiety always end. Like waves in the ocean, they roll in and roll out. The tricky part is we do not always know how long it will take, which can prove to be particularly distressing.

Harmful Effects of Anxiety (Ahuja, 2006; Viyas et al., 2008; http://www.medicalbillingandcoding.org/blog/10-negative-effects-of-anxiety-on-your-brain/ and http://www.webmd.com/balance/guide/how-worrying-affects-yours-body?)

Pathological or abnormal anxiety causes a number of harmful effects on health of the sufferers. These effects may be short term or long term depending upon the severity or duration of the pathological anxiety. Negative effects of anxiety are as follows:

### **Short Term Negative Effects of Anxiety**

- Difficulty in swallowing
- Dizziness
- Dry Mouth
- Rapid heartbeat
- Shortness of breath
- Rapid Breathing
- Fatigue
- Headache
- Inability to concentrate
- Irritability
- Muscle Aches
- Muscle Tension
- Nausea
- Sweating
- Trembling and Twitching

## **Long Term Negative Effects of Anxiety**

### Increased risk of stroke

Constant release of "flight or fight hormones" increases risks to the heart. Research from Stroke: Journal of the American Heart Association indicates that middle-aged men with symptoms of psychological distress including anxiety are "more than three times as likely to have a fatal stroke" than those who do not have problems with anxiety.

### Early memory decline

Anxiety can cause long-term damage to hippocampus cells, which affect memory and learning. As a result, anxiety can lead to early memory decline, especially in elderly patients suffering from anxiety and/or depression.

#### Insomnia

Insomnia and anxiety frequently go hand in hand with each other. Anxiety can cause insomnia, just as insomnia can lead to anxiety. Insomnia is often one of the first symptoms of anxiety.

### **Detrimental impact of emotional distraction**

Anxiety can cause a lack of concentration; can lead to low performance at school or work as well as an inability to maintain relationships with the family and friends.

### Hyperactive brain circuits

Generalized anxiety disorders are at risk for hyperactive brain circuits, an abnormality in the brain. Researchers have identified increased metabolic rates in a variety of areas of the brain in both passive activity and during vigilance tasks, which leads them to believe that patients with GAD are at risk for hyperactive brain circuits.

### Slowing of frontal-prefrontal lobe function

With chronic stress and anxiety, body and brain are kept in an always-on state of alert, which leads to long term effects on the brain. MRI scans have indicated that patients who suffer from chronic anxiety show a "significant slowing of prefrontal lobe function."

#### Loss of brain tissue

In addition to the slowing of frontal-prefrontal lobe function, MRI scans indicate that chronic anxiety sufferers may also have a loss of brain tissue. This change, along with the aforementioned frontal-prefrontal lobe function slowing is "the basis of many forms of mental disturbance and mental illness."

### **Management of Abnormal Anxiety**

Everyone occasionally experiences some anxiety. It is a normal response to a stressful event or perceived threat. Anxiety can range from feeling uneasy and worried to severe panic. The management of anxiety is required when it becomes a problem. There are various methods in modern as well as in Unani System of medicine. Some of them are as follows:

**General Measures:** Some general measures to avoid as well as to treat anxiety are;

- Removal of predisposing factors.
- A source of recreation should be provided like poetry, music etc. for keeping patient happy.
- Maintenance of adequate sleeping atmosphere.
- The room should be airy, open and fragrant.
- Correction of liver and spleen disorders.
- Avoidance of alcohol consumption, smoking etc.
- Abstinence from excess coitus.
- Avoidance of heavy and strenuous work.
- Avoidance of visiting overcrowded, dark and dirtyplaces.
- Avoidance of prolong stay in hot climate.

 Proper care of heart should also be taken intoconsideration and cardio tonic and *Mufarrehe Qalb* (exhilarant) drugs should be used. (Arzani, ?; Ibn Sina, 2001; Jurjāni, 1896; Khan, 2003; Majoosi, 2010; Razi AMBZ, 1967; Tabri, 1997)

### **Psychological Therapy**

Psychological treatment, particularly cognitive-behaviour therapy, has been found to be very effective in the treatment of anxiety. Cognitive behaviour therapy is made up of two components. The first component, cognitive therapy, is one of the most common and well supported treatments for anxiety. It is based on the idea that a person's thoughts in response to an event or situation causes the difficult feelings and behaviours (i.e., it is often not an event that causes distress but a person's interpretation of that event). The aim of cognitive therapy is to help people to identify unhelpful beliefs and thought patterns, which are often automatic, negative and irrational, and replace them with more positive and helpful ways of thinking. The second component of cognitive-behaviour therapy involves assistance with changing behaviours that are associated with anxiety, such as avoidance or restlessness. These may be dealt with through learning relaxation techniques and through changes in the way that certain situations are handled. (Viyas and Ahuja, 2008)

### **Dietary Therapy**

Unani scholars prescribe diet to the patient on the basis of humoral theory, so that the correction of the *Sue Mizaj* will be enhanced. Following are the few principles generally suggested by renowned scholars as:

- Avoidance of all those items that are *Moallide Sauda* and *Safra* (yellow bile and black bile productive) like stale, salty and astringent food.
- Intake of light and delicious food items.
- Use of *Murattib* (emollient) diet such as barley water, milk, pumpkin, cucumber, leafy vegetables like spinach, lettuce, purslane etc.
- Use of bilious concoctive fruits such as dampson, orange, lemon and other citrus fruits.(Ibn Sina, 2001; Jurjāni, 1896; Khan, 2003; Majoosi, 2010; Razi AMBZ, 1967 and Tabri, 1997)

### **Pharmacotherapy**

Antidepressant (e.g. SSRIs, TCA and MAOIs) and anxiolytic drugs (e.g. Benzodiazepine, Adaptole and Afobazole) are the two most commonly used pharmacological treatments for anxiety disorders in modern medicine. Newer anticonvulsant (e.g. Gabapentin, Pregablin) and sometimes antipsychotic drugs (Clozapine and Olanzapine) are also used in the treatment of some anxiety disorders (Fineberg et al., 2007 and Viyas and Ahuja, 2008). Unani physicians have used many single and compound drugs for the treatment of anxiety. The purpose of the drugs used in Unani system of Medicine, is also the correction of Sue Mizaj (Abnormal Temperament) as they were of the opinion that Izterab-e-Nafsani is due to Sue MizajHarSada andSafrawi and Sue MizajSaudawi (Arzani, ?;

Baalabaki, 2001; Ibn Rushd, 1984; Jurjāni, 1896; Khan, 2003; Majoosi, 2010 and Tabri, 2002). In Sue MizajHarSada, there is excess *hararat* (heat) in the body specially in the brain, to reduce the *Hararat-e-Dimagh*, the pharmacotherapy by drugs having Musakkin-e-Hararat (febrifuse) effect are used such as Behidana, Khurfa, Tabasheer, Kahu, Ustukhudoos, Badavard, Bed Mushk, Afternoonetc (Ghani, ?; Hakim, 2002; Ibn Baitar, 1999; Jurjāni, 1896; Kabeeruddin, ?; Khan, 2003; Majoosi, 2010; Razi AMBZ, 1967 and Tabri, 1997). In Sue Mizaj Maddi (Safrawi and Saudawi) restoration and normalization of humors is done by *Tangiya* (removal of excessive humour) and Ta'deeleMizaj (restoration of temperament) with their respective drugs (Ibn Sina, 2001; Jurjāni, 1896; Khan, 2003; Majoosi, 2010 and Tabri, 1997). Some of the poly herbal compound drugs used by Unani physicians for anxiety are MufarrehBarid, ItrifalZamani, DawaulMiskMoatadil, Sharbat Ahmad Shahi, Joshanda Aftimoon, Sharbatneelofar, Majoone Najah, ItrifalSagheer, Majoone Lana etc. (Arzani, 1998; Kabeeruddin, ?; Khan, 2006)

### **Other Treatments**

Other methods used in treating anxiety include electroconvulsive therapy (ECT), transcranial magnetic stimulation (TMS), and psychosurgery. Psychosurgery is used in very extreme cases, when other treatment techniques do not work. (Viyas and Ahuja, 2008)

#### Conclusion

Anxiety is the body's natural response to danger, an automatic alarm that goes off when someone feel threatened, under pressure, or are facing a stressful situation. It is not always a bad thing. In fact, anxiety can help us stay alert and focused, spur us to action, and motivate us to solve problems. But when anxiety is constant or overwhelming and it interferes with our relationships and activities, it stops being functional—that is when we have crossed the line from normal, productive anxiety into the territory of anxiety disorders. There are many different types of anxiety disorders—and many effective treatments and self-help strategies in modern as well as in Unani System of medicine. Once we understand our anxiety disorder, there are steps we can take to reduce our symptoms and regain control of our life.

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