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An overview of concept of depression in Unani medicine and efficacy of *Riyazat* (exercise) in its management

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Abstract

Depression is a common mental disorder, which is characterized by persistent sadness and a loss of interest in activities that normally enjoy, accompanied by an inability to perform daily activities, for at least two weeks. Unani physicians has delineated this disease under the topic of *Nafsiyati awamil*. The description of depression in classical literature of Unani medicine is available as *Malenkholiya* (melancholia). In Unani system of medicine, *mizaj* (temperament) of an individual act as an imperative risk factor for various disorders including the psychiatric disorders such as depression or *Malenkholiya*. Unani system of medicine is enriched with many regimens which can be successfully adopted for management of Depression. *Riyazat* (exercise) is one of them. Exercise can be used as both a direct or complementary treatment in the treatment of mild and moderate symptoms of depression without any side effects and dependency.

Keywords: Depression, *Malenkholiya*, *riyazat*, exercise, Unani medicine

1. Introduction

Depression is a common mental disorder, which is characterized by persistent sadness and a loss of interest in activities that normally enjoy, accompanied by an inability to accomplished daily activities, for at least two weeks.

In addition, there may be also loss of energy, a change in appetite, sleeping more or less, anxiety, reduced concentration, indecisiveness, restlessness, feelings of worthlessness, guilt, or hopelessness and thoughts of self-harm committing suicide^[1].

Depression is the foremost cause of ill health and disability worldwide. Depression is different from usual mood fluctuations. According to the latest evaluates from WHO, more than 300 million people are living with depression, with an increase of more than 18% between 2005 and 2015^[1].

Depression is a major burden upon health care facilities around the globe. Depression is the fourth leading causes of disability worldwide with a prevalence of approximately 5% in general population. It can lead to suicide if left untreated and is responsible for about 850,000 deaths every year.

Suicide is the second leading cause of death in 15-29-years-olds, and unrevealed depression is a major cause. As it is the fourth leading cause of disability, which contributes a major role in increasing the overall global burden of disease.

Depression is a serious mental health concern that will touch most people's life directly or indirectly. It affect a person's ability to work, form relationships, and destroy their quality of life. At its most, severe depression can lead to suicide^[2].

According to NMHS (2015-16) in India, one in 20 (5.25%) people over 18 years of age have ever suffered (at least once in their lifetime) from depression, which amounts to a total of over 45 million persons with depression in 2015^[3].

The World Health Organization approximates that depression is the second foremost cause of potential years of life lost to disablement for both genders within the ages of 15 and 44, making the huge burden of depression^[4].

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2. Methodology

A systematic literature review was performed by surveying relevant peer-reviewed research articles retrieved from several online bibliographic databases such as Research Gate, PubMed, Scopus, Google, Google Scholar, Science Open, and Springer Links. Central Library of Jamia Hamdard University, New Delhi was also accessed for the literature search. Inclusion criteria were literature sources such as peer reviewed journal articles, conference/ seminar proceedings, thesis and dissertations, refereed books and abstracts. Online search strategy involved keywords like depression, Malenkholiya, *Riyazat*, exercise, ilaj bil tadbeer, and unani medicine.

2.1 Concept of depression in Unani medicine

Depression is not described in classical unani literature but the clinical features of Malenkholiya saudawi described in Unani literature mimics the clinical features of depression as described in modern medicine. Unani physicians has narrated this disease under the heading of *Nafsiyati awamil*. So, we can say that description of depression in classical literature of Unani medicine is available as *Malenkholiya* (Melancholia) [5].

In Unani system of medicine, *mizaj* (Temperament) of an individual act as an imperative risk factor for various disorders including the psychiatric disorders such as depression or Malenkholiya. There are four types of temperaments viz. *mizaj e damvi*, *mizaj e Safrawi*, *mizaj e balghami* and *mizaj e saudawi*. Although depression is seen in all four varieties of *mizaj*, but, according to the Unani scholars, among the four temperaments, the people with *mizaj-e-saudawi* (Melancholic temperament) predisposes an individual to develop the depressive symptomatology most [6]. Depression (Major depressive disorder or clinical depression) is a frequent but consequential mood disorder and causes severe symptoms that affect how an individual feel, ponder, and perform routine works, such as sleeping, eating, or working etc.

2.2 Signs and symptoms

If an individual experiences some of the following signs and symptoms most of the day, nearly every day, for at least two weeks, he may be suffering from depression.

- Persistent sad, anxious, or “empty” mood
- Feelings of hopelessness, or pessimism
- Irritability
- Feelings of guilt, worthlessness, or helplessness
- Loss of interest in hobbies and activities
- Decreased energy or fatigue
- Moving or talking more slowly
- Feeling restless or having trouble sitting still
- Difficulty concentrating, remembering, or making decisions
- Difficulty sleeping, early-morning awakening, or oversleeping
- Appetite and/or weight changes
- Thoughts of suicide, or suicide attempts
- Body pains, headaches, cramps, or digestive system problems without a clear physical cause and/or that do not relieve even with treatment [7, 8]

In prospective studies, there are two causes which are anticipated for coronary heart disease in healthy individuals i.e. depression and anxiety [9]. Regarding this, another

research came ahead to affirm that major depressive disorder (MDD) is surely as main risk factor for CHD as hypertension, studies propose that depression often becomes leading cause for heart attack in up to 50 % of cases and increases risk for recurrent cardiac events [10], this can be Accounted by Unani concept in which, eminent Unani scholar Al Jurjani said that during prolonged sadness, whole innate heat of body returns to the heart and congestion takes place there and sudden death occurs [11].

Depression is represented by specific symptoms like low mood, minimal interest in gratifying activities, loss of appetite [4], disturbed sleep, constipation, loss of weight [12], and loss of libido [13], regarding disturbances in digestion, unani physicians suggested that during sadness innate heat goes inside the body slowly [14, 11] due to this phenomenon alteration in digestion is experienced because innate heat is essential for proper digestion. Other symptoms are sleeplessness/sleepiness, psychomotor retardation or excitation, and weariness [4], these conditions are due to extreme heat and dryness in the body because of involvement in the long duration of sadness [14], and difficulty in cognition, and suicidal tendencies are also found.

It is consistently determining that clinical depression may be escorted by a number of cognitive abnormalities, like perceptual biases, attention toward negative feeling, and deteriorations of emotional mental process, particularly implementation functions [15]. In anxiety and depression Cortisol notably, increases. The release of glucocorticoids in humans is actuated by often stressful life conditions [4]. Chronic Stress perceived as risk factor for common cold [16]. Major stressful events in life produce damaging effects on immune system [17].

Unani physicians has described this disease under the topic of *Nafsiyati awamil* and mentioned in their ancient scripture that making changes in our life style through *Asbab e sitta zarooriya* now we can offer long-term benefits to the mental health e.g. *Harkat wa sukoon e badani*. *Asbab e sitta zarooriya* are the six essential factors which are responsible for the healthy life, *Harkat wa sukoon e badani* (Body movement and repose) is one of them.

According to Burhaanuddin Nafis, when matter come in action from the power it is called as *harkat* and the meaning of rest is to remain in action or in the power [18]. Whatever an individual executes the movements result in liberation of *hararat* (heat) [19] In Unani medicine, it is believed that *hararat* is the tool of all *quwa* (faculties). Faculties accomplish the action of processing in food, metabolism and expel the waste materials out of the body. If these waste materials are getting accumulated and not expelled out of the body regularly, it leads the extinction of *hararate-ghareeziyah*. Thus, the *hararat* liberated by physical activity stimulate *hararat-e ghareeziyah* and the *quwa* performs the appropriate action either for assimilation or elimination [20, 21].

This ancient Unani concept is much alike to the modern concept that physical activity releases endorphins that can help to boost mood. Regular exercise is also linked to higher self-esteem, better sleep, less stress, and more energy [5, 8].

3. Riyazat (Exercise)

Riyazat (Exercise) is a voluntary movement with the purpose of *Tanqiyae mawad* (evacuation of wastes material) for an individual. It plays an important role not only in maintaining good health and prevention of diseases but also in curing certain ailments as well. The objectives of performing *Riyazat* are as follows:

- to improve *istehala* (metabolism),
- to remove waste product from the body,
- to tone up individual organs,
- to maintain or improve flexibility of the body,
- to maintain coordination and balance of the musculoskeletal system of the body,
- to relieve anxiety, insomnia, depression as well [22]

It furnishes a vent for releasing negative thoughts and emotions, such as anger, frustration, and irritability. By encouraging the production of neurochemicals in the brain, such as norepinephrine, it can help to relieve from a depressive state. Physical activity must be a part of any therapy for depression. Even if used alone, exercise can often bring startling results [23, 24].

Exercise is defined as repetitive physical activity that is produced as a result of the contraction of skeletal muscles and requires energy expenditure above basal metabolic rate. It is a planned, structured, and voluntary action that is aimed at improving the components of physical fitness [25].

In classical Unani literature *Riyazat* is classified in different types as follows

1. *Riyazat e Haqeeqi/Kulli* /Complete exercise e.g. horse riding [26, 11].
2. *Riyazat e Juziya* /Partial exercise e.g. stone lifting.

Another classification of *Riyazat*

- A. *Riyazat e A'arziya/Gair Iradi* (unwillingly)
- B. *Riyazat e Zatiya/ Khalisa* (26,11)

Types of *Riyazat e Zatiya/Khalisa* According to duration

1. *Riyazat e Qaleela* (short duration exercise)
2. *Riyazate Kaseera* (long duration exercise)
3. *Riyazat e Mo'atadil* (moderate duration exercise)

According to strength

1. *Riyazat e Qawiya Shadeeda* (strenuous exercise)
2. *Riyazat e Zaeefa* (mild strenuous exercise)
3. *Riyazat e Mo'atadil* (average strenuous exercise)

According to Sura at

1. *Riyazat e Sariya* (fast exercise)
2. *Riyazat e Batiya* (slow exercise)
3. *Riyazat e Mo'atadil* (average exercise)

According to strength and Sura, at

1. *Riyazat e Hasheesha* (Fast and strenuous exercise)
2. *Riyazat e Mutarakhiya* (Slow and strenuous exercise)
3. *Riyazat e Mo'atadil* (Average strenuous exercise) [14, 26]

Apart from the types of *Riyazat* there are different modes of *Riyazat*, described in Unani Literature. Such as *Musabiqat* (Wrestling), *Mubatishat* (trials of strength against each other), *Mulakzat* (boxing), *Ahzar* (Running and racing), *Musabiqat* (Brisk walking) [27] Archery, *Zobain* (javelin-throwing) etc. [14, 26, 24, 11, 28, 27]

4. Scientific reports

Scientists at Duke University Medical Center tested exercise against antidepressant medicine. They found that exercise is better therapy for keeping symptoms away from coming back after the depression lifted. This report followed earlier research in which 156 adult volunteers had taken part in a four-month comparison of exercise antidepressant, or a combination. The exercise primarily consisted of brisk

walking, stationary bike riding, or jogging for 30 minutes, plus a 10-minute warm-up and 5-minute cool-down, three times a week.

At Purdue University, psychologists D. D. Lobstein and A. H. Ismail found that middle-aged professors who got abundance of exercise were much less depressed than the most sedentary of their colleagues.

A second study also found the similar results, which was done with 60 subjects divided in three groups viz. exercise (jogging and walking), meditation training, and group psychotherapy. Although all therapies were equally effective at first, but follow-up after the three months of the completion of therapies, showed that the exercisers and meditators had made further gains, while those who were in group psychotherapy had a tendency to relapse. [29]

Another study was done in Sweden with the objective to compare the effectiveness of three interventions for depression: physical exercise, internet-based cognitive-behavioral therapy (ICBT) and treatment as usual (TAU).

A total of 946 patients randomly assigned to one of three 12-week interventions. The assessment was done at 3 months (Response rate 78%). The participants in the exercise and ICBT groups showed significant improvements in depressive symptoms compared with TAU [30].

A study was done to investigate the effect of exercise on therapeutic response in depression treatment. In Psychiatry Department of Firat University Hospital thirty-three patients diagnosed with Hamilton Depression Rating Scale criteria were included in the study. The patients in Group 1 were treated with antidepressant medication and were asked for brisk walking for at least 30 minutes a day, at least 4 days a week, for 12 weeks. Only antidepressant medication was given to the patients in Group 2. The Hamilton Depression Rating Scale, applied to both groups at baseline and at the end of 6 weeks and 12 weeks. There was a statistically more decrease in the average-scaled scores in the Group treated with antidepressant and exercise than the Group treated with only antidepressant [25].

5. Conclusion

Depression is a serious individual and community health problem because it is the most frequent mental disorder in this century. It has a high rate of chronicity and recurrence. It is also a significant risk factor for suicide, and causes workforce loss. Burden of depression and other associated mental health conditions is on upswing globally. Approximately 80% of depressed people are not currently having any treatment. There is long term course of treatment in modern medicine and the side effect of anti- psychotic drugs is well known. Unani system of medicine is enriched with many regimens which can be successfully adopted for management of Depression. Unani scholars have strongly advocated the use of *Riyazat* in *Malenkholiya*. It is known that regular exercise has positive effects on both physical and mental health. There are many studies on the effects of exercise on mental health. Exercise can be used as both a direct or complementary treatment in the treatment of mild and moderate symptoms of depression, which is one of the most common diseases throughout the world today.

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