IAMJ

DEPRESSION SYMPTOMATOLOGY CORRELATION WITH MIZAJ IN YOUNG COLLEGE STUDENTS DURING THE LOCKDOWN

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ABSTRACT

Unani medicine (also called as Greco-Arab medicine) is an ancient system of medicine that originated in Greece. It is more commonly practised in the Indian Subcontinent and has an age-old concept and principles of drug management. This system is based on the Hippocratic theory of four humours viz. blood, phlegm, yellow bile, and black bile, and the four qualities of states of living human body like hot, cold, moist, and dry. Mizaj (temperament) is one of the fundamental concepts of the Unani system of medicine, diagnosis, and line of management of any disease is based upon it. Every human being has been furnished with a specific mizaj through which organs and systems of an individual perform his functions properly. This study aims to assess the relationship between Mizaj and depression. A cross-sectional descriptive study to assess the Mizaj and depression with the help of mizaj assessment proforma based on classical literature and Hamilton Depression Rating Scale (HDRS17) in 119(one hundred nineteen) in college students of a different gender was carried out A and U Tibbia college and hospital, Karol Bagh, New Delhi, India from 2020 through 2021. The findings suggested that depression had a significant association with the variability of mizaj of the person. The restrictions of this study might be the excessive variation between the share of mizaj among the themes, because the majority (49.58%) of participants belonged to the mizaj-e-damvi, and therefore the percentage of mizaj-e-saudawi was much lesser (8.40%).

Keywords: *Mizaj, Hamilton depression scale, damvi, baghami, safravi, saudavi.*

INTRODUCTION

Unani medicine is one of the oldest forms of treatment in the world and was originated in Greece. This system of medicine flawlessly deals with various states of health and disease of the body. This system describes seven essential components of the body, which are called Umoor-e-tabiya namely Arkan or elements, comprising earth, water, air, and fire as different states of matter and the building blocks of everything in the universe; Mizaj (temperament); Akhlat (humors); Aza (organs); Arwaah (life, spirit or vital breath); Quwa (energy); and Afa'al (action)1. The framework of this system is based on the concept of mizaj(temperament) and akhlat(humours). The Unani system gives insights into human personalities by classifying them into four different mizaj (Temperaments) based on the dominance of body fluids(humours). Drugs and diseases are also classified as having different mizaj according to the four humors in treatment.

Mizaj (Temperament) according to Ibn Nafis, the literal meaning is 'intermixture', which is originated from the Arabic word *Imtizaj* which means intermixture2. Grunner defined Mizaj as "Temperament as that quality which results from the mutual interaction and interspersion of the four contrary primary qualities residing within the (imponderable) elements4. Majoosi defined Mizaj as "All sorts of bodies, which are found in this ever-changing world are formed from by four elements (Ustuqussat), comprising earth, water, air and fire and after mixing in different or uniform quantities under the needs of the body. As a result of this mixing, one or two qualities become dominant over the body, and this is called Mizaj5. Hippocrates (460 B.C.), unani physician in his book "Human Nature" set forth the doctrine of body fluids i.e., humours or Akhlat, (singular khilt), that the human body contains four major kinds of humour i.e., Dam (blood), Balgham (Phlegm), Safra (yellow bile) and Sauda (black bile). According to quality and quantity, an accurate proportion and mixing of which (homeostasis) constitutes health and inaccurate proportion and irregular distribution, according to their quantity and quality constitute disease. Thus, this humoural theory states that as long as hemostasis is maintained inside the body, the person will remain healthy and if this hemostasis is disturbed then the disease will develop, and this is the law of treatment in the Unani system of medicine. Thus, this haemostasis of Akhlat deals with every aspect of disease i.e etiology, pathology, prevention, and treatment3.

Depression is not a new entity; it is as old as medicine itself since it was first discussed by Hippocrates (460–370 BC) under the terminology called melancholia (9). Melancholia is the denotation of fassad-e-fikr, that is, disturbance in the intellect of an individual because of reallocation in the customary quality and quantity of sauda (black bile) (10). In the present scenario, however, it is represented as one of the severe forms of depression (11).

Unani physicians of ancient times such as Zakaria Razi, RabbanTabri, Ibn-e-Sina, N. Samarqandi, and M.H. Qarshi mutually recognized the deleterious effects of infiyalat-e-nafsaniyah (emotions) such as grief, anger, happiness, regret, love, and so forth, on the human psyche, especially among women at the times of their pregnancy, childbirth, and puerperium. Moreover, they also gave the concept of other psychiatric disorders such as mania and dementia. (12,13,14).

According to the concept of Unani system of medicine, imbalance of mizaj (body type) of a person acts as an important risk factor for various disorders which includes psychiatric disorders also like depression or melancholia. Unani scholars believed that among the four temperaments, the person with mizaj-e-saudawi (melancholic mizaj) develops the depressive symptomatology most (15). However, it's thought that any of four humors can develop such an illness (16). This study is conducted to find out which mizaj came up with depression symptomatology most during covid 19 lockdown and social distancing restrictions.

Methods

Respondents

The participants were screened according to the following inclusion criteria 1) Individuals of 18-30

years of age 2). Gender 3). Clinically healthy individuals and Exclusion criteria Person with 1) age below 18 years 2). The person with age above 30 years 3). Alcoholics 4). Smokers and tobacco users 5). Pregnancy and lactation and 6). History of trauma.

Research methods

Questionnaire design

There are two questionnaires in this study. Questionnaire 1 is for assessment of mizaj (body type) i.e. Damvi (Sanguineous), Safravi (Bilious), Balghami (Phlegmatic), Saudavi (Melancholic) which is based on Ajnas e Ashra or ten classical parameters i.e. Malmas (Tactus), Lahm-wa-Shahm (Flesh and fats), Ashaar (Hair rate of growth, color, distribution)), Laun-e-Badan (Body Complexion), Hayyat-e-Aza (Physique), Kaifiat-e-Infaal (Responsiveness of organs), Afal-e-Aza (State of functions)), Fuzlaat-e-Badan(body waste), Nom-wa-Yaqza (sleep and wakefulness), Infalat-e-Nafsaniya (Psychic Reactions) described in Unani classical literature and generated by Central Council for Research in Unani Medicine (CCRUM), Ministry of AYUSH, New Delhi. The participants responded to the questionnaire according to their characteristics and were calculated for score and whichever of these Mizaj scored highest, the patient had that Mizaj dominating and controlling his or her body anatomically, physiologically, and psychologically.

Questionnaire 2 is the Hamilton Depression Rating Scale (HDRS17). This scale was developed in the late 1960s by Max Hamilton, a psychiatrist at Leeds University. The scale was composed of 17 components to which participants respond on a Likert-type scale of 0–4. The score of 0–7 is generally accepted to be within the normal range (or in clinical remission), while a score of 20 or higher (indicating at least moderate severity) is usually required for entry into a clinical trial 6,7. The higher the score, the higher the depression symptoms.

Sampling method.

Using simple random sampling in Delhi (India) hundreds (119) of college students from Ayurvedic and Unani Tibbia College and Hospital, Karol Bagh were selected as per inclusion and exclusion criteria and asked to complete the questionnaire. The data collection process started on 2nd March 2020 and ended on 17 August 2020. The participants were adequately informed about all relevant aspects of the survey, including objective and interview procedures. All participants voluntarily participated in the survey and the survey was anonymous.

Investigation methods.

The study was conducted in the form of one-to-one inquiry by individually giving the questionnaire on email or face to face. To ensure the authenticity and effectiveness of the outcome only one proforma of mizaj and HDRS17 along with informed consent was given to participants. Participants either responded to the questionnaire by giving scanned copies through email or by hard copy face to face. All the questions raised by participants were answered by the investigator without interfering with their choices.

Statistical methods.

SPSS statistics software 22.0 used to establish a database for statistical description. The Kruskal-Wallis H test followed by a post hoc Mann-Whitney U test in SPSS was used to analyze the differences between the groups. $P < 0.05$ suggested that the difference was statistically significant.

Consent of participants

All the participants gave their consent to participate in the study. All the participants were altogether got a piece of evidence regarding research ethics and signed a consent form after being fully apprised of the aim of the study, the advantage of participation, and withdrawal of participation. Identifiable personal information was deliberately deleted during the transcription process and was recorded on the questionnaires' transcripts only as ID numbers.

Results

Out of the 119 participants, 44.54% were female and 55.46% were male. Damvi mizaj composed the majority of the 59 participants (49.58%), Balghami mizaj composed of 27 (22.69%), Safravi Mizaj composed of 23 (19.33%), and saudavi composed of 10 (8.40%) participants. Undergraduate students and unmarried students accounted for the largest proportions of the sample.

Table 1: Mean Rank of depression score in different Mizaj group

Mizaj	Number of participants	Mean Rank
BALGHAMI	27	66.89
DAMVI	59	51.85
SAFRAVI	23	56.54
SAUDAVI	10	97.45
TOTAL	119	

Table 2: Test Statistics[a, b]

	Score
Chi-square	17.670
Df	3
Asymp.Sig	0.001

a. **Kruskal Wallis Test**
b. **Grouping Variable: mizaj**

Table 3: Median of Depression score for different mizaj

Mizaj	Median for depression score
BALGHAMI	12.00
DAMVI	8.00
SAFRAVI	8.00
SAUDAVI	23.00
TOTAL	9.00

Table 4: Statistical Significance

COMPARISON	SIGNIFICANT AT p <0.05	MANN-WHITNEY U	z
Damwi vs Safrawi	0.717	643.500	-0.362
Damwi vs Balghami	0.038	574.00	-2.071
Damwi vs Saudawi	0.000	71.000	-3.828
Safrawi vsBalghami	0.407	268.00	-0.830
Safrawi vs Saudawi	0.005	43.000	-2.829
Saudawi vs Balghami	0.007	56.500	-2.696

Statistical Decision

H (degree of freedom) = chi-square test statistic, p value =0.05

H (3) =17.670, p=0.001

Kruskal-Walli's test revealed a statistical difference in mizaj groups across four conditions, chi-square (3, N=119) =17.670, $p<0.001$, and H0 is rejected. As H0 is rejected, it is concluded that the four Mizaj groups do not have the same depression score and at least two groups had a significant difference in depression score. According to table3, the Median depression score was the same and lower in damvi and safravi groups (*Md=8.00*) in comparison to balghami (*Md=12.00*) and highest in saudavi (*23.50*) group.

Mann Whitney U (Post hoc test) was applied to determine which two groups have significant differences and test results are given in Table 4: As shown in the table there is a mean rank difference (M1 M2) in damvi vs. Saudavi which is highest, Safravi vs. saudavi, balghami vs saudavi and balghami vs damvi at p< 0.05 with 95% confidence.

DISCUSSION

According to the classical Unani literature, depression is seen altogether four sorts of mizaj, but the persons with mizaj-e-saudavi (melancholic temperament) are alleged to be more susceptible to get suffering from this disharmony 15,16. In the present study, the primary and secondary assumptions were found to be error-free, as depression was seen altogether as four sorts of mizaj in several percentages (Table 1). Subsequently, Table 1, shows that the mean rank of depression from mizaj-e-saudawi (96.25) was highest than that of the person with mizaj-e-balghami mizaj (70.00) followed by mizaj-e-safravi (54.89), and the lowest person with mizaj-e-damwi (51.27). Yet after the analysis, the difference among the four groups was found to be statistically significant (P < 0.05) (Table 2). The findings suggested that depression symptoms had a significant association with the variability of mizaj of the person. Moreover, any mizaj could predispose the person to depression. the restrictions of this study might be the excessive variation between the share of mizaj among the themes, because the majority (49.58%) of participants belonged to the mizaj-e-damvi, and therefore the percentage of mizaj-e-saudawi was much lesser (8.40%). Therefore, a more accurate assessment might be done if the themes from all sorts of mizaj were in equal fractions. Further study needs to be conducted with a large sample size to get a better understanding of the correlation of depression symptomatology with mizaj.

CONCLUSION

Depression symptoms during home quarantine in covid lockdown were common in all four categories of mizaj. But it affected saudavi mizaj group most. So, early diagnosis of this disorder is necessary for routine practice at clinics especially in saudavi mizaj to prevent hazardous consequences.

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