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By

Saba Zaidi

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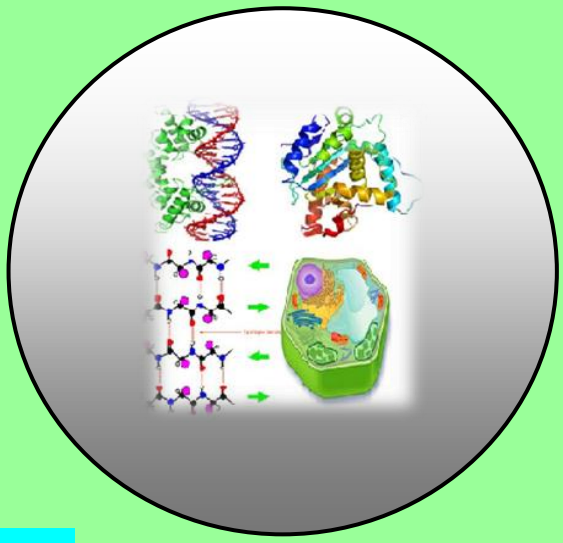

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Dr. Saba Zaidi
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jbiolchemres@gmail.com

RESEARCH PAPER

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Study of Spasmodic Dysmenorrhoea in Reference to Temperament (Mizaj) in Adolescent Girls

Saba Zaidi

Ajmal Khan Tibbiya College, A.M.U, Aligarh, U.P., India

ABSTRACT

Adolescence is a transition period from childhood to adulthood and is characterized by a spurt in physical, endocrinal, emotional and mental growth with a change from complete dependence to relative independence. The period of adolescence for a girl is a period of physical and psychological preparation for safe motherhood. One of the major physiological changes that take place in adolescent girls is the onset of menarche, which is often associated with problems of irregular menstruation, menorrhagia and dysmenorrhoea. Of these, spasmodic dysmenorrhoea is one of the common problems experienced by many adolescent girls. The aim of study is to establish a relationship between the spasmodic dysmenorrhoea of female subjects and their temperament (Mizaj).

Key Words: Physiological changes, Menarche, Menorrhagia, and Dysmenorrhoea Temperament (Mizaj).

INTRODUCTION

The Unani system of medicine is mainly based on the concept of temperament (Mizaj). Every individual, in the state of health, is categorized on the basis of temperament. It is because of the temperament that every person has a unique personality of his own on the basis of which he is identified. Body built, facial features, etc. of each person are different because of the particular temperament. As diverse geographical conditions as regions, countries, cities and habitats etc exert the effects on the human temperament. The basis of temperament which includes habitat, stature, built, weight, age, complexion, state of the hair of the body, mental state etc. have been described in detail by Unani physicians. When a woman reaches to the puberty her excrements (Fadhlat al- badan) of the body flows from

the uterus as dirty blood (khoon-e-fasid), this is known as Tams (Menstruation) **(Khan Ajmal Haziq 1983)**.Puberty marks the beginning of adolescence. Adolescence is the span of human growth extending from the immaturity of childhood to the physical and psychological maturity of adulthood. This period extends from 10-20 years **(WHO 1977)**. The most striking event in the whole process of female puberty is undoubtedly the onset of menstruation **(Dewhurst, 1984)**. Menstruation occurs in 95% of girls by the age of 13 years, although delay in the remainder up to age 16 must be considered as normal **(Marshal)**. Menstruation is normal body function. Most women get only vaginal bleeding for 3-5 days with no discomfort. However around one quarter women get menstrual discomfort- Menstrual molimina. These discomforts do not interfere with usual day's activity. Only 5-10% develops painful menstruation interfering day's activities in their about 30 years of menstrual life **(Dawn, 2002 and Ratan, 1983)**. Dysmenorrhoea, also known as painful periods or menstrual cramps, is pain during menstruation **(Osyande and Mehuli, American College of Obstetrician and Gynecologists 2012)**. Dysmenorrhoea is defined as painful menstruation of sufficient magnitude so as to incapacitate day to day activities. Dysmenorrhoea is cramp like, dull, throbbing pain that occurs usually emanates from the lower abdomen and that occurs just before and /or during menstruation **(Harel 2006)**. Dysmenorrhoea appears to have an impact on public and occupational health **(Reddish, 2006, Coco, 1999)**. The incidence of dysmenorrhoea is affected by socioeconomic status, occupation, psychological makeup and age **(Khan, 2003)**. It is also a major cause of absenteeism from work thus decreasing efficiency and quality of life among affected women **(Sabaratnam et al., 2005), (Babli et al., 2000)**. It is estimated that 60% of girls of 12-17years age group have complain of dysmenorrhoea and 50% of women experienced some degree of dysmenorrhoea **15**. While 10% are incapacitated by it. It has been also estimated in some studies that up to 75% of young women experience some dysmenorrhoea in spontaneous menstrual cycles, with 15-20% of women experiencing severe pain **Sabaratnam et al., 2005**.

The Unani physicians have discussed dysmenorrhoea under the heading of Waje rehm/darde rehm/usre tams (uterine pain) **(Ibn Sina and Al Qanoon Fil Tib 2007 and Al Razi and Al Hawi Fil Tib 2001)**. It is caused due to different types of sue mizaj , displacement of uterus, amraze rehm sabeqa (previous diseases of uterus), qillate Tams (oligomenoarrhoea), insidade fame rehm (cervical stenosis), quroohe rehm (ulcers of uterus),sartane rehm(uterine cancer) etc. **(Ibn Sina and Al Qanoon Fil Tib 2007).** Razi mentioned that causes of darde rehm are warme rehm (inflammation of uterus), ihtebas e tams (amenorrhea), sailane khoon (menorrhagia), sailane mani (leucorrhoea), uterine polyp, uterine rupture etc. **(Al Razi and Al Hawi Fil Tib 2001).**

Types: Dysmenorrhoea is classified as Spasmodic (Primary) and congestive (Secondary) dysmenorrhoea. Primary dysmenorrhoea affects as many as 50% of post pubescent females, 10% of them severely enough to result in absenteeism **(Dawood 2005)**.

Etiology and Pathogenesis of Primary Dysmenorrhoea

1. OBSTRUCTIVE FACTORS: Spasmodic painful uterine contractions are set up by the retained blood within the uterus during menstruation which results from obstruction to outflow of blood due to pinhole os or conical cervix. The factor fails to explain all cases of dysmenorrhoea; in most of them pain occurs even with normal uterus. Unilateral dysmenorrhoea may be caused by uterine malformation like rudimentary horn, bicornuate or septate uterus **(Dawn, 2002)**.

2. HYPOPLASIA FACTOR: Sometimes the uterus is cochleate or has a long cervix. It is said that the myometrium contains an excessive amount of fibrous tissue which disturbs the normal contraction pattern. Against this view is the fact that this factor is not always present **(Tindall, 1987)**.

3. MUSCLE ISCHEMIC FACTOR: The pain may be produced by uterine muscle ischemia. The ischemia is due to exaggerated contractions caused by the action of prostaglandins. The latter also causes vascular spasm **(Dawn, 2002).**

4. NEUROGENIC FACTOR: Spasmodic dysmenorrhoea could be due to in coordinate muscle action of the uterus as a whole. It could be explained by an imbalance in the autonomic nervous control of muscle, one in which an overactive sympathetic system leads to hyper tonus of the circular fibres of the isthmus and internal os **(Tindall, 1987)**.

5. PSYCHOLOGICAL AND SOCIAL FACTORS: Psychological factors have been suggested, since dysmenorrhoea is common in patients with emotional difficulties, sexual problems and work dissatisfaction. However, it is not clear whether the pain may cause psychological problems or psychological problems predispose to pain.

Surveys have demonstrated a number of important clinical associations of primary dysmenorrhoea. It is more common in the age group 15-19, in those who are single, separated or divorced, in those who have not borne more than 1 child and in those who suffer with migraine. Smokers and ex-smokers are 3 times more likely to have severe dysmenorrhoea. This may be explained by the effect of components of cigarette smoke on uterine contractility, or alternatively the perception of pain may encourage women to smoke more heavily. Alcohol drinkers and ex-drinkers have an equally high incidence of severe dysmenorrhoea (**Mackay et al., 1983).**

6. PROSTAGLANDINs: Increased production of prostaglandin $F_2\alpha$ (PG $F_2\alpha$) resulting in increased uterine contractions (dysrhythmic) and markedly elevated intrauterine pressures (up to 400 mm Hg), possible increased sensitivity to PG $F_2\alpha$ as well (**Smith, 2002**).

7. ENDOCRINE FACTOR: The dependence of dysmenorrhoea on ovulation and progesterone production, suggests that the action of progesterone on the blood vessels and myometrium is important in causing the pain. In addition, progesterone is known to cause narrowing of the cervical canal by an effect on local smooth muscle (**Mackay et al., 1983**).

CLINICAL CHARACTERISTICS

1. Patient is young, usually 18-24 years, rare after 30 years.

2. Painful menses usually occurs years after menarche.

3. Pain starts 1-2 hours before the onset of menses, usually continues for the first 12-24 hours and then gradually gets less.

4. Pain is colicky and cramp like, occurs in the hypo gastric region and radiates to the thighs. There may be low backache.

5. Constitutional symptoms –

- Nausea
- Vomiting
- Diarrhea (Prostaglandin effects).
- Fainting

MATERIAL AND METHODS

SELECTION OF VOLUNTEERS

The aim of study is to establish a relationship between the dysmenorrhoea of female subject and their temperaments. For this purpose the volunteers were selected randomly between the age group of 18- 28 years. The study was carried out on 294 unmarried female volunteers selected from Ajmal Khan Tibbiya College and some other faculties of Aligarh Muslim University. Preference was given to the students residing in hostels because their environmental and nutritional status is almost similar.

DETERMINATION OF TEMPERAMENT

The Unani system of medicine is mainly based on the concept of temperament. Every individual, in the state of health, is categorized on the basis of temperament. It is because of the temperament that every person has a unique personality of his own on the basis of which he is identified. Body built, facial features, etc. of each person are different because of the particular temperament. As diverse geographical conditions such as regions, countries, cities and habitats etc. exert their effects on the human temperament. The basis of temperament which includes habitat, stature, built, weight, age, complexion, state of hair of the body, mental state etc. have been described in detail by Unani physicians.

An assessment of temperament was made on the basis of a questionnaire prepared in the light of criteria described in classical Unani books. Age, weight, complexion, color of the hair, condition of flesh and fat, hairs of the body, sense of perception, physical functions- sleep, quality of excreta etc. were taken into consideration for the determination of mizaj.

Besides these points for the assessment of temperament, the questionnaire also includes the points of detailed menstrual cycle such as age at menarche, premenstrual symptoms, period, duration, association of pain etc.

This questionnaire was distributed among the female volunteers. An isolated and stress or fear free environment was provided to them.

After getting this filled questionnaire the temperament was determined and their menstrual history was obtained. Statistical evaluation of obtained values was done by using student t test and z test.

PROFORMA

Name of the volunteer : _____
Age : _____
Height : _____
Weight : _____
Address : _____
Chief Complaint (if any) : _____
Marital status : _____

1. SKIN TEXTURE

Warm and smooth	☐	Soft and moist	☐
Hard and Hot	☐	Rough and Cold	☐

2. COMPLEXION

Reddish		Whitish	
Pale		Blackish	

3. BODY BUILT

Muscular		Fatty	
Moderate		Lean and thin	

1. TEXTURE OF HAIR

Thick		Thin	
Curly		Straight	

2. DISTRIBUTION OF HAIR

Average		Scanty	
Moderate		Excessive	

3. APPETITE

Increased		Normal	
Strong		Deceased	

4. THIRST

(++)		(+)	
(++++)		(+++)	

5. URINE

Moderate quantity	☐	White, more quantity	☐
Yellow, less quantity	☐	Turbid, less quantity	☐

6. SLEEP

Average	☐	Excess sleep	☐
Disturbed	☐	Insomnia	☐

7. Anger Joy

Come on easily & easily lost	☐	Comes on hardly	☐
Frequent severe & persist for long	☐	Infrequent but persist	☐

8. MENSTRUAL HISTORY

Age at Menarche : _____

PREMENSTRUAL SYMPTOMS

(1) Irritability : _____
(2) Malaise : _____
(3) Headache : _____
(4) Colon spasm : _____
(5) Frequency of micturition: _____
(6) Feeling of fullness in the breast, abdomen : _____
(7) Edema on face & feet: _____
(8) Backache : _____
(9) Weight gain/loss : _____
(10) Short tempered: _____
(11) Eruption of acne on face: _____
(12) Depression : _____

9. MENSTRUAL CYCLE

Regular	☐	Irregular	☐

10. PERIOD OF MENSTRUAL CYCLE

28 days	☐	30 days	☐
31 days	☐	32 ays	☐

11. DURATION OF MENSTRUAL CYCLE

3 days	☐	5 days	☐
7 days	☐		

12. MENSTRUAL FLOW EXCESSIVE ON

1 day	☐	2 day	☐
3 day	☐		

13. ASSOCIATION OF PAIN

Low	☐	Moderate	☐
Severe	☐		

RESUTS AND OBSERVATIONS

The 294 unmarried female volunteers were thoroughly screened for temperamental assessment on the basis of ajnas-e-alamat. The detail of observation was noted.

Table 1. Distribution of Volunteers According to Temperament.

Temperament	Frequency	Percentage
Damvi	120	40.81
Balghami	64	21.76
Safrawi	110	37.41

According to temperament the volunteers were divided into 3 groups (Table 1 and Fig 1).

Group I: Damvi Temperament includes 120 volunteers (40.81).

Group II: Balghami Temperament includes 64 volunteers (21.76).

Group III: Safrawi Temperament includes 110 volunteers (37.41).

In this study volunteers of Saudawi Temperament were found very few that is why those volunteers were excluded.

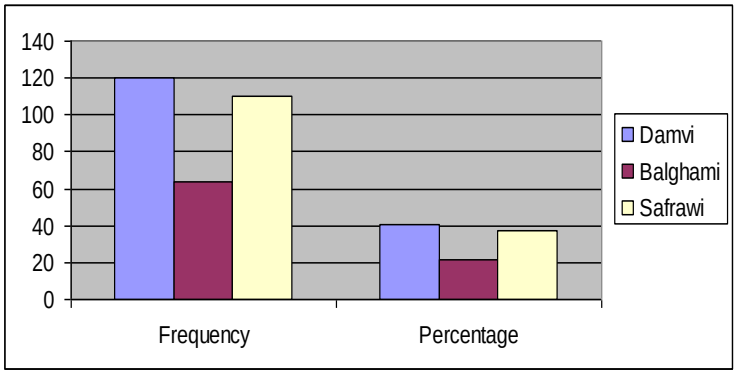

Figure 1. Distribution of Volunteers According to Temperament.

Table 2. Distribution of Volunteers According to Age.

Age in years	No. of volunteers	Percentage	Damvi	Balghami	Safrawi
18-20	21	7.14%	6	5	10
20-22	76	25.85%	25	14	37
22-24	73	24.82%	30	21	22
24-26	56	19.07%	24	14	18
26-28	68	23.12%	35	10	23
Total	294	100%			

During study, all 294 volunteers were divided into 5 groups according to age (Table 2 and Fig. 2). In group I (18-20 years) there were 21 volunteers, out of which 6 volunteers belongs in Damvi temperament, 5 in Balghami temperament and 10 in safrawi temperament (7.14%).

In group II (20-22 years): there were 76 volunteers out of which, 25 in Damvi temperament, 14 in Balghami and 37 in Safrawi temperament (25.85%).

In group III (22-24 years): there were 73 volunteers out of which, 30 in Damvi temperament, 21 in Balghami and 22 in Safrawi temperament (24.85%).

In group IV (24-26 years): there were 56 volunteers out of which, 24 in Damvi temperament, 14 in Balghami and 18 in Safrawi temperament (19.07%). In group 5(26-28 years): there were 68 volunteers out of which 35 in damvi temperament, 14 in balghami temperament, 23 in safrawi temperament (23.12%).

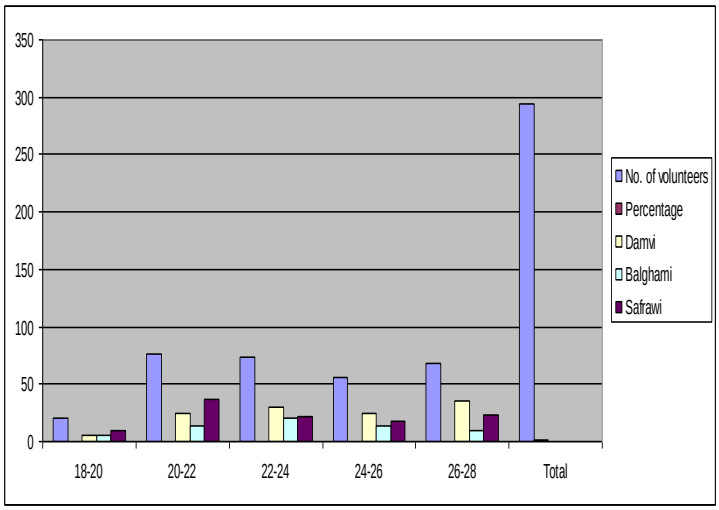

Figure 2. Distribution of Volunteers According to Age.

Table 3. Distribution of Volunteers According to Association of Pain During Menstrual Cycle.

Degree of Pain	Damvi	%	Balghami	%	Safrawi	%
Low	57	47.5	25	39.06	48	43.63
Moderate	26	21.66	22	34.37	24	21.81
Severe	37	30.83	17	26.56	40	36.36

According to degree of pain, the volunteers were divided into 3 groups (Table 3 and Fig. 3).

Group I (Low degree pain): This group includes 57 Damvi temperament volunteers (47.5%), 25 Balghami temperament volunteers (39.06%) and 48 Safrawi temperament volunteers (43.63%).

Group II (Moderate degree pain): This group includes 26 Damvi temperament volunteers (21.66%), 22 Balghami temperament volunteers (34.37%) and 24 Safrawi temperament volunteers (21.81%).

Group III (Severe degree pain): This group includes 37 Damvi temperament volunteers (30.83%), 17 Balghami temperament volunteers (26.56%) and 40 safrawi temperament volunteer (36.36%).

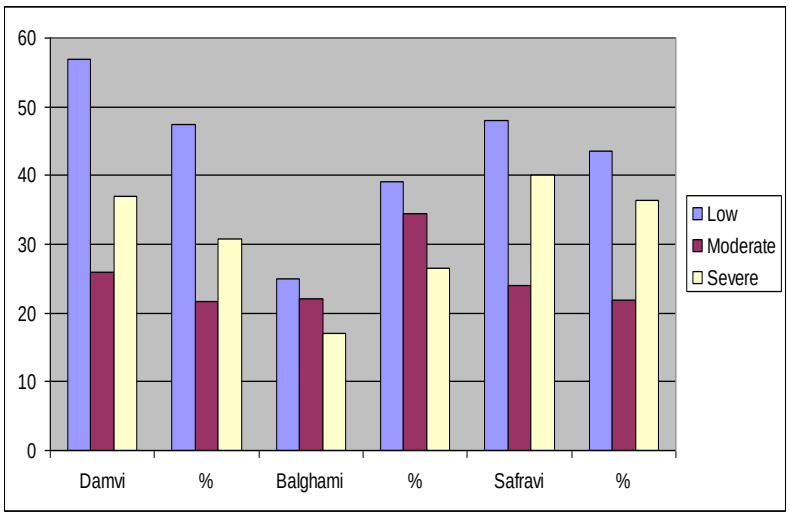

Figure 3. Distribution of Volunteers According to Association of Pain During Menstrual Cycle.

DISCUSSION

In this study an attempt has been made to establish relationship of the temperament of individuals with primary dysmenorrhoea. With the limitation of resources and time, the study sample could not become large enough however the results show that there does exist relationship between Primary dysmenorrhoea and the temperament of the individuals. The eminent Unani physicians had described menstrual cycle and its disorders and showed its deep relation with temperament in respect of their causes and treatment as mentioned in this paper earlier.

In our sample study it is clearly evident that the primary dysmenorrhea has close relation influenced by temperament of an individual. Every person has possessed a unique temperament, which includes his physical characteristics, physiological profile and psychological as well as emotional state which attribute to the mizaj. So in this study it is found that the volunteers had Damvi temperament out of 120 volunteers, 57 had low, 26 had moderate and 37 had severe pain before and during the menstrual cycle.

In Balghami volunteers out of 64, 25 experienced low, 22 moderate and 17 had severe pain before or during menstrual cycle.

In Safrawi volunteers out of 110 volunteers the degree of pain experienced by volunteers was Low in 48 volunteers, Moderate in 24 volunteers and severe pain in 40 volunteers.

The results observed during the research work have been analyzed statistically and explained in terms of tables and graphs clearly. The results obtained, show that the temperament exerts influence on degree of pain in different females. It has been found that pain during menstruation experienced by different temperamental personalities in varying degree according to sayings of Unani Physicians.

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Corresponding author: Dr. Saba Zaidi, Assistant Professor, D/O Tashreeh-wa-Munafeul Aza, Ajmal Khan Tibbiya College, A.M.U, Aligarh, (India).
Email: sabazaidi437@gmail.com