The relationship between stress and migraine headaches in women and men

Sara Barkhordari1

1Master student of Tabriz University, Tabriz, Iran

Abstract

Patients with chronic diseases are at high risk of developing psychiatric disorders, especially depression and anxiety. Migraine is one of the most common neurological disorders that can have psychological consequences. Migraine is one of the diseases that affects cognitive variables such as depression and stress. Therefore, the present study aims to investigate the relationship between tension and migraine headaches in men and women in Khorramabad. This study was conducted in the field. A questionnaire was used as an instrument for data collection and SPSS software was used for analysis. The sample group of this study consists of 60 persons out of which 30 are healthy persons and 30 are migraine headache sufferers. The faces were randomly selected and a stress test was performed on them, after which the (t) method was applied. The effect of tension is stronger in women with migraine than in men with migraine.

Keywords: Keywords tension, migraine, women and men.

Introduction

Migraine is a highly debilitating disorder in which psychological variables can be effective (Farzaneh Ranjbar Noushri, 2022). Migraine is the second neurological disorder that is associated with severe pain and causes a variety of problems for sufferers and those around them (Bashrepour and Mohammadnejad, Devin, 1402). One of the most common problems for migraine patients is timely diagnosis and comprehensive treatment. Nowadays, however, there is a way to diagnose, prevent and even treat this disease that you can rely on. Prevention is always better than treatment, and this also applies to migraine. He took advantage of migraine prevention medications, such as imipramine, which prevent the occurrence of damage and unavoidable costs and treat the disease. The reason for the high speed is the low cost, high efficiency, etc. (Nuri Khalile Deh and Salar Amoli, 1402 Migraine affects about 12% of the general population. Migraine disease is one of the causes of brain parenchymal lesions. The use of cross-sectional imaging of the brain, especially MRI, has opened a new window on pathogenesis, diagnosis and follow-up of patients. It is very severe and is often accompanied by nausea. The seizure and pain can affect the front part of the head and sometimes the entire head and can last for several hours or days. The cause is not clearly known, although the main causes are excitement and stress. The arteries of the head then contract and dilate. In some cases, the dilation of the arteries of the head is clearly visible. Before the onset of the seizure, the signs that herald the onset of the seizures appear due to the constriction of the blood vessels. These signs are:

Black spots on the field, vision, feeling of rushing, skin problems when speaking, whistling, ear, numbness and weakness of the limbs, extreme sensitivity to light, nausea, change of mood, a state of tension of consciousness accompanied by a feeling of euphoria follows. (Hossein Azad, 1995)

In many cases, there is a family history of migraine, but it is still not clear whether heredity plays a role in its development (Hossein Azad, 2014).

The onset of migraine attacks may be related to life changes, such as stressful situations, entering puberty, going to school or college, or starting work. It is generally accepted by all experts that stress causes attacks. Migraine plays a role in this (Hossein Azad, 2014). People who are prone to migraines are perfectionists by personality and have strong beliefs such as "I have to get this done", and when they fail, they usually struggle with this problem. Some people who are prone to migraines seem calm and relaxed, while they may feel hidden anger and stress due to the inability to do something perfectly. (Hossein Azad, 1374) in migraine sufferers, success and progress cause them to be busy and anxious. They have a lot of energy and struggle, love order, resist change and are inflexible. They are socially cold (Rasoulzadeh, 1996).

Psychiatrists believe that migraines are caused by anger and nervous attacks and that headaches are a painful reaction to the attacks and the manifestation of our body against the true resentments of life. . As for love, they have problems and are unable to express their feelings and stand up to their elders (Hamid, Ganjian 1990). Therefore, this article examined the relationship between tension and migraine headaches in women and men.

Background research

In 2023, Seyyedah Zahra Emami Mowaydi conducted a study entitled Comparison of brain-behavioral systems and positive and negative emotions in women with migraine headaches and healthy women. Migraine headaches and healthy women. The sample examined in this study includes two comparison groups, of which 95 are women with migraine and 98 are healthy women who were randomly selected. The neurologists were selected from referrals to clinics and medical centers, and the healthy group also included the patients' companions who matched the patient group in terms of age, gender and education. The Gray-Wilson Personality Questionnaire was used to examine the behavioral systems of the brain, and the Watson-Clark and Teljen Positive and Negative Emotion Scale was used to measure positive and negative emotions. Data were analyzed using 27SPSS software and multivariate analysis of variance. Statistical analysis showed that there is a significant difference between the two groups of women with migraine headaches and healthy women on the dependent variables of the behavioral inhibition system and the passive avoidance component and negative affect. but on other variables of the behavioral activation system and the fight and flight system and the components of the behavior of active avoidance, shutdown, war. Avoidance behavior and positive affect showed no significant difference, Seyyedah Zahra Emami Moveidi, 2023).

in 2022, Hashmipour and Esfahani Asl conducted a study on the effectiveness of neurofeedback therapy on sleep quality and pain control in migraine sufferers attending neurology clinics in Ahvaz. The aim of the present study was to determine the effectiveness of neurofeedback treatment on sleep quality and pain control in migraine patients referred to neurology clinics in Ahvaz. The method of this study was semi-experimental with a pre-test and post-test design with a control group. Among these patients, 30 subjects were selected by purposive sampling and randomly assigned to an experimental group (15 subjects) and a control group (15 subjects). The Pittsburgh Boyce et al. (1989) and McGill's Pain Control (1971) questionnaires were used to collect data in the pre-test and post-test phases. The neurofeedback treatment was carried out in 20 sessions of 30 minutes each for the experimental group, while the control group received no training. Multivariate analysis of covariance (MANCOVA) and univariate analysis of covariance (ANCOVA) were used for data analysis. The results showed that the neurofeedback treatment intervention improved sleep quality and increased pain control in migraine sufferers. On this basis, the results of the present study showed that neurofeedback therapy can be effective in improving sleep quality and pain control (Hashmipour and Esfahani Asl, 2022).

In 2021, Saeidi et al. conducted a study titled "Evaluation of the effectiveness of acupressure on the severity of acute migraine headaches in patients referred to the emergency department, a randomized clinical trial study. This study aimed to determine the effect of acupressure on acute migraine headaches in patients referred." Materials and methods: This randomized clinical trial study with code 30N20110906007494IRCT was conducted in 2018 on 84 migraine patients who referred to the emergency department of Bo Ali Sari Hospital. The patients were randomly divided into three groups by the software (28). (Acupressure, control and sham were divided. In the intervention group, acupressure was performed through 8 points of the body for 8 seconds, followed by 2 seconds of rest and repeating this sequence for 3 minutes for each point. For the control group, only drug treatment And for the sham group, pressure was applied to 8 unrelated points. Before and after 24 minutes of massage, the patients' pain was recorded by the Visual Analog Scale (VAS). Data analysis was performed using Kruskal-Wallis and Mann-Whitney U tests. Findings Before the intervention, the median (third quartile - first quartile) of pain intensity in the intervention groups 6 (5.75-6), sham (5 (5-6)) and control 5 (5-6) (P=0.175) and this The rate after the intervention in the intervention groups was 1.5 (12), sham 3 (3-4) and control (5 (5-6)) (P<0.001). After the intervention, the average ratings of pain intensity in The intervention group was significantly lower than the sham (P < 0.001) and control (P < 0.001) groups. This rate in the sham group was significantly lower than the control group (P < 0.001). Conclusion Acupressure can be useful for migraine patients to reduce the intensity of pain caused by acute headache along with other treatments (Saidy et al., 1400).

In 2019, Mohammadi Zaidi et al conducted a study titled the effectiveness of coping strategies training on awareness, pain self-efficacy and indicators related to migraine headaches. Is. Methodology 60 patients with migraine headaches referred to Bandar Anzali specialized clinics participated in a randomized controlled experimental study with random sampling method in the form of experimental and control groups. In order to collect data, demographic and personal information questionnaire, coping strategies questionnaire, pain self-efficacy questionnaire and awareness scale before and two months later were used. The training program consisted of 5 sessions of 60 minutes, which were implemented in groups of 8 to 10 people. Independent and paired chi-square t test and analysis of variance were also used to analyze the data. Findings The results showed a significant increase in the average score of awareness and self-efficacy in patients of the experimental group after the educational intervention (P<0.001). Also, the average frequency of intensity and duration of migraine

headaches in patients of the experimental group significantly decreased after the educational intervention (P<0.05). In addition, with the exception of the positive reappraisal strategy, the average frequency of use of all coping strategies in the patients of the experimental group It increased significantly after training (P<0.05). Conclusion The preparation of trainings based on strategies to deal with chronic pain along with treatment protocols in order to control chronic headaches and improve the quality of life of patients with migraine headaches is suggested to specialist doctors and medical staff (Mohammadi Zaidi et al., 2019).

In 2018, Baghbanian et al conducted a study titled prevalence of types of headaches in patients with multiple sclerosis. This study was conducted to determine the prevalence of types of headaches in these patients. Asan was conducted on patients with MS with simultaneous headache who referred to neurology clinics affiliated to Mazandaran University of Medical Sciences in 2016. The collected data was subjected to statistical analysis with SPSS version 24. Findings: Out of 129 MS patients with a history of headache, 41.1% had migraine headaches and 56.6% had tension headaches. 47% of patients suffered from severe types of headaches, the highest rate of which was related to migraine headaches. There was a significant relationship between the relapsing-remitting type of MS and tension headaches and migraines (P=0.001). About half of the patients did not mention the history of headaches before MS, and no correlation was found between new migraine headaches and them (0.05) (Baghbanian et al., 2018).

In 2016, Nik Sarasht and his colleagues conducted a study titled determining the effectiveness of hemoencephalography (HEG) on pain anxiety and pain intensity in patients with migraine aged 25-55 years in Isfahan. The present study aimed to determine the effectiveness of hemoencephalography (HEG) on pain anxiety. And the pain intensity of migraine patients 25-55 years old in Isfahan was done. Method: The work of this clinical research was with a control group with a follow-up period of one month. The research population included all patients with migraine aged 25-55 who referred to the treatment centers of Isfahan Neurology and Psychiatrists during the fall of 2014. Sampling was available and 30 patients with migraine were selected and according to the inclusion and exclusion criteria, they were randomly divided into the test group (15 people) and the control group (15 people). Subjects answered the pain anxiety questionnaire and the pain intensity questionnaire before and after the intervention. The test group was treated with hemoencephalography and no intervention was done in the case of the control group. Findings: The results of analysis of variance with repeated measurement showed that the difference between the test group and the control group in pain anxiety and pain intensity was significant (P<0.05). Conclusion: According to the results of the research, it is possible to benefit from hemoencephalography treatment to reduce pain anxiety and pain intensity in patients with migraine (Nick Sarasht et al., 2015).

Research Methodology
The research method was field-survey.

Target population:
The target population consists of people with migraine and healthy people of Khorram Abad city

Sampling method
The sampling method is to collect information about migraine by referring to several articles of neurologists in Khorramabad city, who randomly gave a questionnaire to people with migraine symptoms to complete, and the sample size of this research is 60 people, of which 30 are were randomly selected in these offices and 30 of them were healthy people.

Measuring tool:
Stress Questionnaire This questionnaire is from the book (Under Standind Ingyouself) by SIGNET Publications, which has 6 questions, questions 6, 5, and 3 each have several questions that each subject is given a copy to specify their answers.

Questionnaire on the subject of stress:
 Introduction: Our body is equipped with an early warning system designed to recognize and eliminate danger and to inform us before accidents occur. Externally, this system has five sensors: sight, hearing, touch, taste and smell. Behind these sensors is a more complex computer that contains the information collected by the receptors (the most important part of the brain), the muscle and nerve reactions. It controls the body and, depending on the threat situation, gives the command to stand up and fight or to turn away and run.

The various changes that take place in the nervous system as a result of our reaction to danger or a situation have a clear psychological impact. We call these changes our emotions, which tell us what state of arousal our system has gone into. Indeed, all living beings live in a dangerous environment, threatened by human attacks or current struggles, and therefore our nervous system, whether in friendship or hostility, happiness or depression, works with a very high sensitivity.

In the days when the average life expectancy was only 30 or (if you were lucky) 40 years, this sensitivity was not very important, but nowadays many people, especially as they approach middle age, feel that with the increase in life's pressures, their emotional defenses are somehow Everyone is weakened in the face of danger and threat by showing some emotional reaction to the response, but changing the amount of stress caused by a particular situation is important. adapt and adjust to the conditions, and the lack of adaptation often manifests itself in the form of symptoms of physical illness or abnormal mental states.

Procedure:
This questionnaire consists of 6 questions, each of which contains an option that respondents select and check according to the option they accept.

Analysis and evaluation:
In this questionnaire, a score is given for each of the question options and after this is done, the scores of the questions are added up and their scores are listed from (2) - 6 - 3 - 0 - . The sum of the test scores ranges from 0 to over 60, where they are respectively listed as (11-25), (26-45), (46-60), over (60) and in each of the questions the characteristics as follows:

If the score from their test is (0-10), the answer seems a little suspicious or they are certainly living a dull and boring life, but we should tell the subject to check it again and more honestly. People with a score of (11-25) have a normal result and are really a balanced and compatible person whose sum of scores should be close to one of the 4 signs (S-S-K-G) and if two of them are close to each other, a score of (26-45) means that the person has a neurotic behavior and the problems in life were too big or too serious for that person.

Those whose score is (46-60) indicate that the person has an unpredictable and troublesome emotional life and life does not make them happy and this person should take action to solve their problems. People with a score of (over 60) have an extremely high score, which probably means that the person is in a critical and dangerous phase of their life or that an error has been made in the evaluation, and if this is the case, the person needs to see a doctor to solve the problem.

The analysis of this questionnaire is based on a detailed psychological assessment. These factors include:
Anxiety, worry, obsession and hysteria are measured by this questionnaire. To determine the validity of this questionnaire, we tested 30 people with migraine and 30 normal people in the city of Khorramabad.

Statistical method:
Since the nature of the data is continuous data, the scale used to measure the data is interval and the data represents one group in terms of number of groups and two variables in terms of number of variables, (t) is used:

Discussion
This part of the study is divided into two parts, namely
1 This section describes the data obtained using the frequency distribution table and the statistical method (t) of the independent variable. 2 Analysis of the results: In this section, we test each of the research hypotheses using statistical models.

Table 1: The raw scores of the subjects in two groups of healthy people and people with migraine from the stress questionnaire

No	X1	X2	X1	X2
1	76	22	5776	484
2	77	36	5929	1296
3	73	23	5329	529
4	50	31	2500	961
5	46	55	2116	3025
6	45	21	2025	441

7	43	22	1849	484
8	43	11	1849	141
9	42	23	1764	529
10	42	24	1764	576
11	38	22	14444	484
12	35	33	1225	1089
13	46	10	2116	100
14	38	41	1444	1681
15	43	31	1849	961
16	73	35	5329	1225
17	77	31	5929	961
18	45	30	2025	900
19	73	59	5329	3481
20	76	26	5776	676
21	77	21	5929	441
22	46	44	2116	1936
23	73	63	5329	3844
24	75	33	5625	1089
25	77	34	5929	1156
26	68	12	4624	144
27	65	97	4225	729
28	59	36	3481	1296
29	43	30	1849	900
Total	1667	907	95036	32043

Findings and data analysis

$$\bar{x}_1 = \frac{\sum x_1}{x_1} = \frac{1667}{30} = 55/56$$

$$\bar{x}_2 = \frac{\sum x_2}{x_2} = \frac{907}{30} = 30/23$$

$$\sum x_1^2 = \sum x_1^2 - \frac{\left(\sum x_1\right)^2}{x_1} = 95036 - \frac{(1667)^2}{30} = 2407$$

$$\sum x_2^2 = \sum x_2^2 - \frac{\left(\sum x_2\right)^2}{x_2} = 32043 - \frac{(907)^2}{30} = 4622$$

$$t = \frac{55/56 - 30/23}{\sqrt{\frac{2407 + 4622}{30 + 30 - 2}\left(1/30 + 1/30\right)}}$$

$$t = \frac{25/33}{\sqrt{(121/18)(0/06)}} = \frac{25/33}{7/53} = 3/363$$

As can be seen, in order to test the hypothesis of stress comparison between healthy people and people with migraine headaches, a statistical method or independent variable was used, the results of which are given in Table 2.

Table 2: Comparison of the effect of stress on healthy people and those with migraine headaches

Significant level	AF	Table T	T obtained	Average	Subjects	Number
0/05	58	2/676	3/363	55/56	Migraine headache	30
				30/23	healthy people	30

As Table 2 shows, because (t) obtained is equal to (363.3) than (t) in the table (2.676) with the degree of freedom (58), it can be said that the research hypothesis has been confirmed and the level of significance Its value is equal to 0.05 and the result is that there is a significant difference between healthy people and people with migraine headaches in terms of tension (stress) and tension in migraine people is more than healthy people.

Table 3. Subjects' raw scores among women with migraine and men with migraine from the stress questionnaire

No	X1	X2	X1	X2
1	76	73	5776	5329
2	77	46	5929	2116
3	50	45	2500	2025
4	43	43	1849	1849
5	38	42	1444	1764
6	35	42	1225	1764
7	73	46	5329	2116
8	75	38	5625	1446
9	77	46	5929	2116
10	77	45	5929	2025
11	76	73	5776	5329
12	77	46	5929	2116
13	73	59	5329	3481
14	68	43	4624	1849
15	65	43	4225	1849
Total	980	644	67418	37172

$$\bar{x}_1 = \frac{980}{15} = 65/33$$

$$\bar{x}_2 = \frac{644}{15} = 42/93$$

$$\sum x_1^2 = 67418 - \frac{(980)^2}{15} = 3397$$

$$\sum x_2^2 = 37172 - \frac{(644)^2}{15} = 10023$$

$$t = \frac{65/33 - 42/93}{\sqrt{\frac{3397 + 10023}{15 + 15 - 2}\left(\frac{1}{15} + \frac{1}{15}\right)}} = \frac{22/4}{6/25} = 3/584$$

As can be seen, in order to test the hypothesis of the research and compare the stress among people with migraine headaches between men and women, the statistical method (t) of the independent variable was used, the results of which are given in Table 4.

Table 4. Comparison of tension among people with migraine headaches among women and men

AF	Significant level	Table T	T obtained	Average	Subjects	Number
28	0/05	2/676	3/363	65/33	Women with migraines	30
				42/93	Men with migraines	30

As you can see. (t) is equal to (3.584) than (t) in the table (2.676) with a degree of freedom of 28, so it can be said that the hypothesis of the research was confirmed and its significance level is equal to 0.05 and the result that there is a difference between women with migraine and men with migraine in terms of tension, so women with migraine suffer more tension than men.

Conclusion

This study investigated the relationship between stress and migraine in men and women. The aim was to measure the comparison of tension between healthy people and people with migraine headaches and also to compare the tension between women and men with migraine headaches.

On this basis, we used the stress questionnaire, which we tested on 60 people who formed our samples. We then analyzed the data from this questionnaire and came to the following conclusions: There is a significant difference in tension and in people with migraine, tension (stress) is greater and the (t) obtained in our table is (363.3), thus confirming the research hypothesis and the significance level is 0.05. In the second hypothesis, the comparison between women and men, a (t) of (3.584) was obtained, indicating that there is a difference between women with migraine and men with migraine in terms of stress, as women with migraine are more stressed than men.

Discussion of the research findings:

As we know, we used the (t) method in this study. The result was that people with migraine have more stress than healthy people, and that women with migraine have more stress than men with migraine.

In fact, in this research, which was conducted between healthy people and people with migraine, we found that there can be a significant relationship between migraine and stress, and of course healthy people also have a balanced level of stress due to problems and life issues, but to some extent people make it sick

References

1. Azad, Hossein 1995 Psychopathology, Baath publications, Tehran
2. Emami Muwaidi Seyedah Zahra, 2023, comparison of brain-behavioral systems and positive and negative emotions in women with migraine headaches and healthy women, the second national conference on family and school studies, Bandar Abbas 1874609/https://civilica.com/doc
3. Baghbanian, Seyyed Mohammad and Sajjadi, Saravi Seyedah Naghmeh and Chiragmakani Hamed and Nadi Ali Asghar 2018, Prevalence of types of headache in patients with multiple sclerosis, Journal of Mazandaran University of Medical Sciences, Doreh, 29, No. 1785603, 180/https://civilica.com/ doc
4. Basharpour, Sajjad and Mohammadnejad, Devin Arefe 2023 Causal modeling of pain perception in migraine sufferers based on distress intolerance with the role of fear of progress as a mediator: a descriptive study of the disease Scientific journal of the University of Medical Sciences, Rafsanjan, Volume: 22, Number:https://civilica.com/doc/1895918,9
5. Rasulzadeh, Tabatabaei, Kazem 2015 Investigation of the personality characteristics of migraine sufferers and comparison of the effect of drug therapy with the method of gradual stress relief training along with biofeedback in these patients, PhD thesis, Tarbiat Modares University
6. Ranjber, Noushri, Farzaneh 2021, Mediating role of coping styles and perceived social support in the relationship between nature and character dimensions and psychological well-being in people with migraine, Health Psychology Quarterly, Volume: 10, Number: 1906092, 39/https://civilica .com/doc
7. Saidi, Pouria and Bagheri, Nasami Masoumeh and Mohammad Portamtan, Reza Ali and Cheragh, Makani Hamed and Madani, Zahra 2021. Evaluation of the effectiveness of acupressure on the severity of acute migraine headaches in patients referred to the emergency department, a randomized clinical trial study.
8. Alaei, Abdul Rasoul, Barzin Maryam, Zarwani Ashraf, and Abdini Seyed Mahmoud 2013, a study of brain MRI findings in patients with migraine compared to people without migraine, Journal of Mazandaran University of Medical Sciences, Volume 22, Number: 179084698/https://civilica.com/ doc

9. Ganjian, Hamid 1369 Migraine headaches, Islamic Azad University, Roudhen branch Journal of Mazandaran Doreh University of Medical Sciences, 31, No. 1785085203/https://civilica.com/doc

10. Mohammadi Zaidi, Issa and Seifpour Tahereh, Morshidi Hadi and Alizadeh Hamid 2019, Effectiveness of coping strategies training on awareness, pain self-efficacy and indicators related to migraine headaches, Journal of Health Research in Society, Volume 6, Number: 2 https://civilica.com/doc/1863696,

11. Nouri Khalileh, Deh Milad and Salar, Amoly, Hossein, 2023, extraction and measurement of migraine drug from biological environment with hollow fiber solid phase microextraction, the second international conference of advanced research of nanotechnology students, Tehran, 1861688/https://civilica.com /doc

12. Nik Sarasht, Rizvan, and Gholamreza Manshi, and Karimi, Somia, 2015. Determining the effectiveness of hemoencephalography (HEG) on anxiety, pain, and pain intensity in patients with migraine aged 25-55 years, Isfahan, Journal of Principles of Mental Health, Volume 18, Issue: 179870200/https ://civilica.com/doc

13. Hashmipour Mehdi and Esfahani, Asal, Maryam 2022, The effectiveness of neurofeedback therapy on sleep quality and pain control in migraine headache sufferers referring to specialized brain and neurology clinics in Ahvaz, Journal of Psychological Achievements, Volume: 29, Number 2-https://civilica.com/doc/1891571