

## Impact of migraine headache on psychosocial life of Type-D personality in medical students: A Mix method study

Aabida Lateef, Muhammad Arshad Dahar, Khalida Latif

Division of continuing Education, PMAS Arid Agriculture University Rawalpindi and Preston University, Islamabad, Pakistan

**Objective:** To screen out the type-D personality migraineurs and to determine the impact of migraine on psychosocial life of medical students through quantitative and qualitative method.

**Methodology:** Two medical colleges (Rawalpindi medical College and Islamic International Medical College) were selected randomly and 100 medical students (50 from each college) of third year of the age range 19-22 years were selected randomly. For quantitative data; Migraine Disability Assessment Scale, Type-D personality scale and Quality of Life scale were used to identify migraineurs, screen out Type-D personality students and measure the psychosocial life of medical students, respectively. Qualitative data were collected through interview guideline.

Regression and cluster analysis were carried out for quantitative and qualitative data.

**Results:** Migraine had significant impact on psychosocial life of medical students having type-D personality reflecting their poor quality of life.

**Conclusion:** Migraine is responsible for the poor quality of life in medical students. It is needed that practitioners must be equipped to manage and treat it effectively. It is important to educate sufferers to cope with the migraine triggering factors as they affect their psychosocial life. A cross cultural study can be conducted to find out the cultural differences in migraine and psychosocial life. (Rawal Med J 201;41:410-414)

**Keywords:** Migraine headache, psychosocial, Type-D personality, medical students.

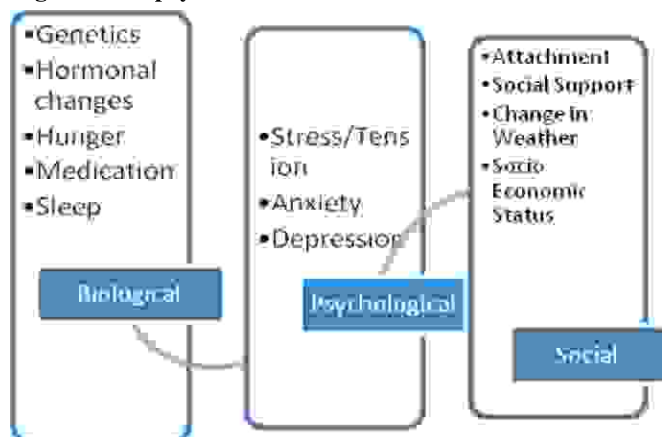
### INTRODUCTION

Migraine is a heterogeneous disorder characterized by attacks that vary in frequency, duration, severity and symptomatology. Migraine sufferers experience reduced health-related quality of life in comparison with the general population.<sup>1</sup> There are two types of migraine; migraine with aura MA and migraine without aura MOA.<sup>2</sup> In migraine, the arteries of extra cranial (temporal) becomes dilated and these patients are treated with vasoconstrictors.<sup>3,4</sup> Another theory postulates that spreading reduction in cerebral blood flow in patient migraine with aura was triggered a revolution in thinking.<sup>5</sup>

Type-D personality is distressed personality. They have negative point of view towards their life and are mostly pessimistic. They suppress their emotions and it leads to the most susceptible type of depression. They lack high self esteem and have social interest but due to fear of rejection they do not express their emotions openly. They are affected by the negative emotions such as depression, stress, worry and anger. Migraine risk factors include family history,

hormonal changes, stress/tension, female gender, depression, anxiety, epilepsy and low socioeconomic status.<sup>11,12</sup> Buse et al have given a bio psychosocial model (Fig. 1).<sup>6</sup>

Figure 1: Biopsychosocial Model



A study on the patients of migraine and their stress levels showed that value for daily hassle was  $10.7 \pm 1.2$  higher than other stressful factors.<sup>7</sup> Another

study reported that psychological factors were contributing to 80% of the causes<sup>8</sup> and changes in weather, fasting in Ramadan, physical activity, lack of sleep were contributing as factors of migraine.<sup>9</sup>

In Pakistan, population-based studies have been conducted to estimate the prevalence and burden of migraine. Gender differences were explored and results were found to be highly significant.<sup>10</sup> However, such studies are much limited. No study according to researcher's knowledge has been conducted to evaluate the 'Impact of migraine headache on psychosocial life of Type-D personality in medical students via mix method'.

## METHODOLOGY

It is a mixed method study and used multi stage random sampling technique. First phase used quantitative method and second phase utilized qualitative method. Two medical colleges (Rawalpindi medical College and Islamic International Medical College) were selected randomly at the first. Later on, 100 medical students (50 from each college) of third year of the age range 19-22 years were selected randomly.

Migraine Disability Assessment Scale (MIDAS) developed by Stewart et al. was used.<sup>11</sup> Some items included in this scale give information about the frequency and duration of headaches, other are based on how often these headaches limited their ability to participate in activities at workplace. Reliability of this scale is .80. The possible score could range from 0-450. Participants have to mention the days of his last three months in which they had been suffering from migraine.

Quality of Life scale was used to measure psychosocial activities of participants which was developed by Flanagan, as cited in Burckhardt.<sup>12</sup> In this scale, there are 16 items and it is 7 point rating scale. Reliability for this scale is 0.82.

Initially to generate an item pool, brainstorming sessions were conducted with individuals suffering from migraine. Based upon the important areas identified by them, 11 items interview guideline was developed. Afterwards, experts were consulted for feedback of the prepared interview guide. The guidelines were finalized which comprised of four main questions with related 7-9 items.

All APA guidelines were followed and informed

consent was obtained. After collection of the data Regression analysis, Content analysis and Cluster analysis were done.

## RESULTS

The responses given by the participants indicated that migraine affected the work efficacy of the Migraineurs. Respondents mentioned that they find it difficult to initiate and complete their work. They refer it to as: *"don't want to do work"*. While explaining it further another participant shared that: *"It affects my work performances almost on daily basis"* Participants shared that migraine cause's irritability in mood. This irritability further leads to anger and makes adjustment difficult. It was also evident that migraine affected the family relationships of individuals. As shared by one of the participants: *"become irritated"*. Some of the participants said that they felt pain during migraine. As one of the participant responded that: *"feel pain in eyes"*. Majority of the participants shared that due to migraine their academic performance was affected. As one of the respondent said: *"Academic performance is badly affected"*. Impact on psychosocial life is shown in Table 1.

## Quantitative Analysis

**Table 1. Impact of migraine on psychosocial life.**

	SS	df	MS	F	Sig.
<b>Material and Physical Well-being</b>					
Regression	14.753	5	2.951	3.185	.011
Residual	87.075	94	.926		
Total	101.828	99			
<b>Relationships with other people</b>					
Regression	22.116	5	4.423	4.660	.001
Residual	89.224	94	.949		
Total	111.340	99			
<b>Social, Community, and Civic Activities</b>					
Regression	35.352	5	7.070	4.985	.000
Residual	133.336	94	1.418		
Total	168.688	99			
<b>Personal Development and Fulfillment</b>					
Regression	16.850	5	3.370	2.758	.023
Residual	114.853	94	1.222		
Total	131.704	99			
<b>Recreation</b>					
Regression	19.074	5	3.815	2.713	.025
Residual	132.156	94	1.406		
Total	151.230	99			

P<0.05

### Qualitative Analysis

Fig. 1. Responses of migraineurs for daily life activities.

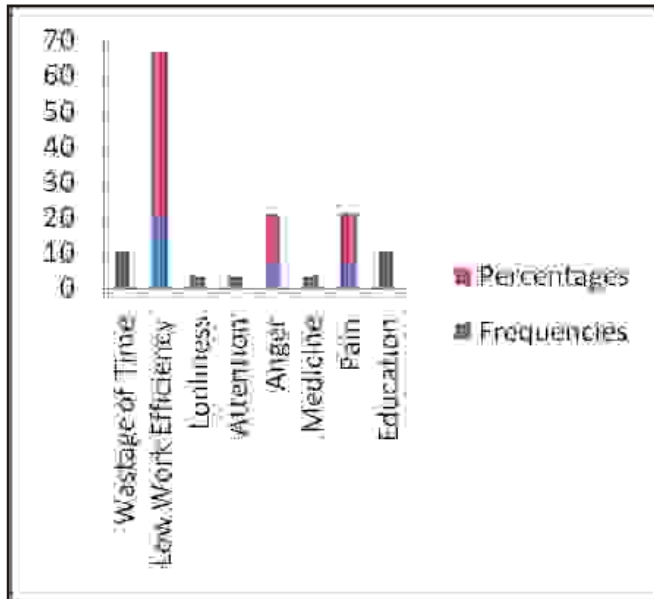
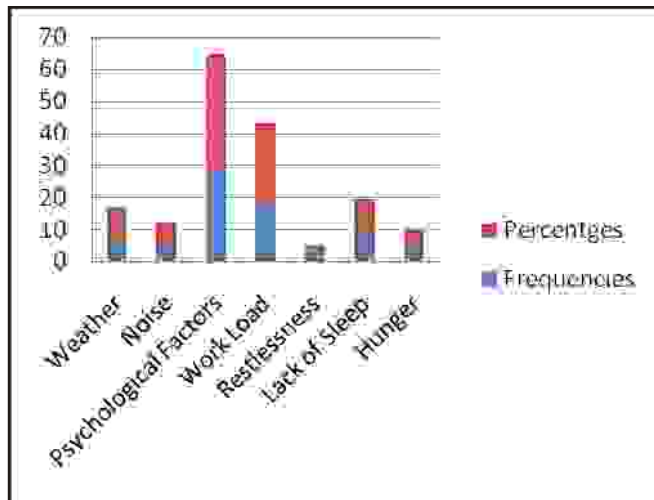


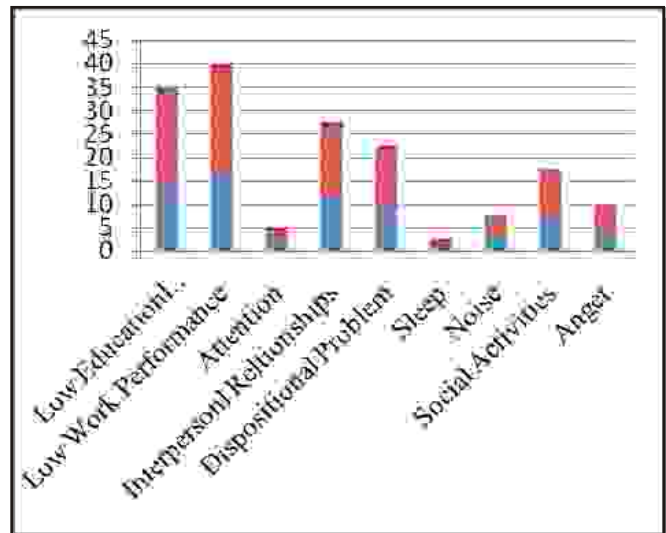
Figure 1 illustrates the content analysis of the qualitative data.

Fig. 2. Responses of migraineurs for causes of migraine.



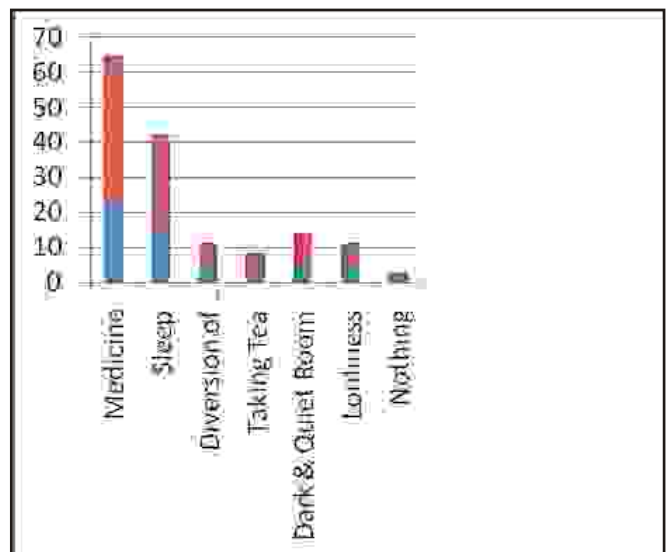
Frequency and percentage for psychological stressors is high (Fig. 2). Psychological factors were identified by majority of the participants as said by one participant: *"it is caused by stress, depression"* Some participants reported that workload was the cause of migraine: *"due to overburden work"* Lack of sleep was also trigger of migraine: *"due to lack of sleep"*.

Fig. 3. Responses of the migraineurs on Interpersonal relationships and their academic performance.



It was found that 19.72% migraine affected the academic performance of the students (Fig. 3). Low educational performance: *"I am unable to perform my work in a right manner as it should be done"* Interpersonal: *suffers from broken relations, not able to participate even in family arranged events"* Low work performance: *"nothing is done in a proper manner, if tries to do it did not seem better"*.

Fig. 4. Responses of the migraineurs for relieving techniques from migraine.



It was found that 44.68% participants use medicine or different methods for the cure (Fig. 4). Some of

the participant replied that they treat migraine through taking medicine as one of the participants mentioned that: *"by taking tablet"*. As shared by participant that to get relieve from migraine we sit in dark & quiet room i.e: *"by keeping room dark for some time, switching off the lights"* Sleep is also the way to get relieve from migraine: *"take sleep"*.

## DISCUSSION

Results of our study are similar to studies by Sieber et al.<sup>13</sup> Smitherman et al found that sufferers of migraine had poor quality of life and psychosocial performance.<sup>14</sup> The second phase of the our study consisted of qualitative data which was collected through interview by the same 100 migraineurs that were included in the phase one for quantitative study. First question was to find out the 'affect of migraine on daily life of migraineurs'. The responses given by the participants indicated that migraine affected the daily life 'work efficacy' of the migraineurs. They mentioned that they find it difficult to initiate and complete their work.

Second question was to 'know the causes of migraine'. Responses of participants identified the main causes of migraine, which were psychological stressors, work load and restlessness. Third question was to find out the 'impact of migraine on educational capabilities, psychosocial activities, career and on mood'. It was found that migraine has poorly affected the academic performance of the students. Those students who had migraine did not perform well in academic area. Work performance and interpersonal relation were also affected by the migraine. Percentage for low work performance was also high.

Last question was to find out the 'relieving techniques from migraine'. Majority of the participants were inclined to use medicine and sleep for migraine cure. Rest of the participants responded that they use different techniques like divert attention, take tea and use dark and quiet room to minimize migraine. Likewise, the results of the cross - sectional study conducted on 380 students in Northeast Nigeria showed the association between impact of migraine on student's life and their worse academic performance.<sup>15</sup> Smitherman et al found that sufferer of migraine have poor quality of life

and psychosocial performance.<sup>14</sup>

Further studies on effects of migraine can be conducted on larger sample size from various universities, secondary, higher secondary and graduation level. A cross cultural study can be conducted to find out the cultural differences in migraine and quality of life.

## CONCLUSION

Quantitative as well as qualitative data found that migraineurs who have Type-D personality had poor quality of life and had adverse affect on their psychosocial life. The practitioners must be equipped to manage and treat migraine effectively. It is important to educate sufferers to ensure that they have an active role in managing the lifestyle affected by migraine.

### Author Contributions:

Conception and design: Aabida Lateef

Collection and assembly of data: Aabida Lateef, Khalida Latif

Analysis and interpretation of the data: Aabida Lateef

Drafting of the article: Aabida Lateef, Khalida Latif

Critical revision of the article for important intellectual content:

Muhammad Arshad Dahar

Statistical expertise: Aabida Lateef, Muhammad Arshad Dahar,

Khalida Latif

Final approval and guarantor of the article: Muhammad Arshad Dahar

**Corresponding author email:** Muhammad Arshad Dahar:

arshid1969@hotmail.com

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