

Prevalence and Triggering Factors of Migraine Among Students of Islamia University Bahawalpur, A Cross-Sectional Population Based Study

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ABSTRACT

The objective of this study was to obtain information about the prevalence and triggering factors of migraine among the students of Islamia University Bahawalpur. This Cross-sectional, population-based study was conducted among 320 students of Islamia University Bahawalpur. Self-administered questionnaire was made and distributed among 350 students to collect data. Students were selected randomly from each professional year. Response rate was 91.4% (n=320; 138=male, 181=females). The Questionnaire included demographic data such as age, gender, family history, questions on headache based on the international Headache Society. Also, different characteristics of headaches such as: frequency, duration, location, quality, and intensity of pain, influence of physical activity, nausea, vomiting, phonophobia and photophobia and different triggering factors such as: stress, depression, noise, anxiety were questioned. The prevalence of migraine in students of Islamia University Bahawalpur was 8.75% (17 females, 11 males) Out of 320 participants, 28 had migraine. The age of participant in the study was 17 to 30 years. The most common triggering factors were change in sleep pattern (64.29%), stress (46.43%), and change in dietary habit (25%). The prevalence of migraine among Islamia University Bahawalpur was 8.75%. Modification of the common triggering factors like stress, change in sleep patterns and change in dietary habits

can help in reducing the frequency and severity of migraine.

Key Words

Prevalence, Migraine, Triggering factors.

INTRODUCTION

Headache is a perpetual neurological disorder which makes daily activities less useful and has negative impact on personal satisfaction (Matuja WB *et al.*, 1995). Ordinarily it influences one portion of the head, throbbing in nature and keeps going for 2 to 72 hours (Kurt S and Kaplan Y, 2008). Related symptoms may incorporate queasiness, retching and affectability to light solid or smell (Aminoff *et al.*, 2009). The pain is exacerbated by physical action (Bussone G, 2004). Up to 33% of individuals have an aura: commonly a brief time of visual unsettling influence that flags that the migraine will soon happen (Bussone G, 2004). Every so often, an aura can happen with little or no headache tailing it (Pryse-Phillips and William, 2003). It is trusted that headaches results because of a blend of ecological and hereditary components (Piane M *et al.*, 2007). Around 66% of cases keep running in families (Bartleson JD and Cutrer FM, 2010). Changes in the hormone levels may likewise assume a job in the development of the migraine, as migraine influences more probable boys than girls before puberty and a few times more in women than men after puberty (Lay CL and Broner SW, 2009)(Stovner LJ *et al.*, 2006). The risk of migraine generally diminishes during pregnancy (Lay CL and Broner SW, 2009). The hidden systems are not completely known

(Sanvito WL *et al.*, 1996). They are nonetheless, accepted to include the nerves and veins of the brain (Bartleson JD and Cutrer FM, 2010).

The pervasiveness of migraine in the United States has been steady more than 20 years, around 11.7% to 13.2% (Lipton RB *et al.*, 2007)(Victor TW *et al.*, 2010). In 2010/2011, an expected 8.3% of Canadians (2.7 million) revealed that they had been determined to have migraine by a wellbeing proficient. Females were more probable than males to report migraine: 11.8% females, 4.7% males. Contrasted with the national figure, the predominance of migraine was bring down in Quebec (6.8%) while higher in Manitoba (9.5%), Nova Scotia (9.1%) and Ontario (8.8%) (Ramage Morin PL and Gilmour H, 2014). Bindu Menon *et.al* from India demonstrated that the pervasiveness of migraine in medical students was 42.3% (males 38% and females 62%) (Bindu Menon and Neeharika Kinnera, 2013). ISHAQ ABU ARAFEH *et.al* from Pakistan demonstrated that the assessed commonness of cerebral pain over periods between multi month and lifetime in youngsters and teenagers is 58.4% and the pervasiveness of migraine over periods between a half year and lifetime is 7.7% (ISHAQ ABU-ARAFEH *et al.*, 2010). All inclusive, around 15% of individuals are influenced by migraine (Vos, T *et al.*, 2010). It frequently begins at pubescence and is most noticeably awful during middle age (Kurt S and Kaplan Y, 2008). In a few ladies they turn out to be less regular after menopause (Sanvito WL *et al.*, 1996). Starting at 2016 it is a standout amongst the most widely recognized reasons for incapability (GBD, 2016). In current study we evaluated the prevalence and triggering factors of migraine among students of Islamia University Bahawalpur.

Methodology

It was cross-sectional population based study. The data was collected from January 2018 to May 2018. Students from Islamia University of Bahawalpur were included. Three hundred and fifty questionnaires were distributed randomly; all were told about the purpose of study before participating which was totally voluntarily. Three hundred and twenty questionnaires were

properly filled and included in this study and incomplete questionnaire were excluded. The response rate was 91.4%. The male participants were 139(43.44%) and the females were 181(56.56%).

Data collection:

To conduct this study a cross-sectional population-based questionnaire was developed. The questionnaire was designed according to diagnostic criteria given by International Headache Society (IHS).

Questionnaire contains demographic data, such as: age, gender family history of headache. Also different characteristics of headaches such as: frequency, duration, location, quality, and intensity of pain, influence of physical activity, nausea, vomiting, phonophobia and photophobia and different triggering factors such as: stress, depression, noise, anxiety were questioned. Total 320 students were chosen for study (n=320), only students of age 16 to 30. The Participants were guided to complete questionnaire carefully and it was ensured that their information will remain confidential.

Data analysis:

Data analysis was performed by using Microsoft Excel and Statistical Package for Social Science (SPSS).

Results:

We examined 320 students to evaluate prevalence and triggering factors of migraine in Islamia University of Bahawalpur among age 16 to 30. Out of total 320 students, there were 139(43.44%) males and 181(56.56%) females. Table 1, contains the socio-demographic details of the study population. Out of 320, 102 were found with headache (31.87%) while Migraine was found in 28(8.75%) (17 females, 11 males). Table 2 shows the prevalence of migraine among males and females. Females were more likely than males to have migraine. Table 3 shows onset time of migraine, its triggers and other medical problems of patients. Triggering factors were change in sleep pattern (64.29%), stress (46.43%), and change in dietary habit (25%). The onset of pain was seen at morning (60.71%) and during sleep (17.86%). Patients who experience all common symptoms of migraine including nausea, vomiting, neck stiffness, visual disturbance, photophobia and phonophobia during attack was

35.43%. Duration of pain in 47.86% of the patients was 2-5 hours, in 27.14% lasts for 2 hrs whereas among 17.83% it lasts for 5-72 hours. Patients suffering from unilateral pain was 35.71% whereas 28.57% suffering from bilateral pain. Fig 1 shows the symptoms percentage of migraine; Fig 2 shows the percentage of migraine according to duration of pain; Fig 3 shows the percentage of migraine according to frequency of pain and Fig 4 shows the percentage of migraine according to pain location.

Discussion:

In the most recent decade cerebral pain has been a noteworthy issue enduring a vast population in developing countries (Rang and Dales, 2008) (Mateen FJ et al., 2008). It delivers best outcome when treatment measures should take early. The most well-known drugs utilized for the management of pain are NSAIDS and narcotic analgesics, directed at the beginning of pain (Ruth Woodrow, 2007).

The result of our investigation dependent on international cerebral pain society (IHS) criteria (2004), demonstrated that the migraine pervasiveness in students of Islamia University of Bahawalpur was 8.75%. ABU ARAFEH et.al from Pakistan demonstrated that the predominance of migraine over periods between a half year and lifetime was 7.7% (ISHAQ ABU-ARAFEH et al., 2010). Bindu Menon et.al from India demonstrated that the commonness of migraine among medical students was 42.3% (males 38% and females 62%) (Bindu Menon and Neeharika Kinnera, 2013).

Mehmet Kemal from Turkey demonstrated that the pervasiveness of migraine among university students was 12.4% (Demirkirkan MK and Ellidokuz H, 2006). Khan A et al. from Pakistan showed that the prevalence of migraine among medical students of Peshawar was 38.3% (Khan A et al., 2012).

In our study it is uncovered that the vast majority of the general population experiencing migraine encounters migraine once in a month while in less number of patients its recurrence

is once in seven days. Area of pain is another important viewpoint. It was resolved that a large portion of the patients feel one-sided torment and others feel reciprocal torment separately on high frequencies resembling to an investigation directed by Winner et al 2003 (Winner DO P et al., 2003).

It was evaluated that duration of pain in approximately half (47.86) of the patients is 2-5 hours whereas among 17.83% it lasts for 5-72 hours. In our study 35.43% patients mentioned that they experience all common symptoms of migraine including nausea, vomiting, neck stiffness, visual disturbance, photophobia and phonophobia during attack. Stephen and Silberstein, 1995 also reported the presence of common symptoms in large population experiencing migraine (Stephen D and Silberstein MD, 1995).

In our study, stress, change in dietary habits and sleep disturbance were observed to be the most common triggering factors in migraine patients and this finding is upheld by Kutlu A et al from Turkey in his study (Kutlu A et al., 2010).

Conclusion:

It was concluded from our study that the prevalence among students of Islamia University Bahawalpur was 8.75%. Change in sleep pattern, stress and change in dietary habits are common triggering factors. Modification in triggering factors can help in reducing the frequency and severity of migraine.

A worldwide training project might be expected to perceive the significance of successful migraine treatment. Illuminating patients about the sickness through enlightening projects isn't just critical in the treatment of migraine assaults, yet it will likewise lessen disability from migraine (Khan A et al., 2012).

.Conflict of interest statement:

The authors declare that they have no conflict of interest.

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Table 1: Characteristics of study population

S.No	Characteristics	Number (Percentages)
1	Gender	
	Male	139(43.44%)
	Female	181(56.56%)
2	Age	
	16-20	123(38.44%)
	21-25	148(46.25%)
	26-30	49(15.31%)
3	Occupation	
	Students	320(100%)

Table: 2 Percentage of Migraine, Headache and normal from study population (n=320)

Characteristics	Percentage (%)
Migraine(28)	8.75%
Males(11) having migraine	39.29%
Females(17) having migraine	60.71%
Headache(102)	31.87%
Normal (190)	59.38%

Table: 3 Onset and Triggers of Migraine and other associated diseases

S.No	Characteristics	Number (Percentages) (n=28)
1	Onset of Pain	
	During Sleep	5(17.86%)
	In morning	17(60.71%)
	Not at specified time	6(21.43%)
2	Triggers	
	Change sleep pattern	18(64.29%)
	Change dietary habits	7(25%)
	Others	3(10.71%)
3	Disease conditions	
	Depression	3(10.71%)
	Stress	13(46.43%)
	Anxiety	3(10.71%)
	None	4(14.29%)
	All	5(17.86%)

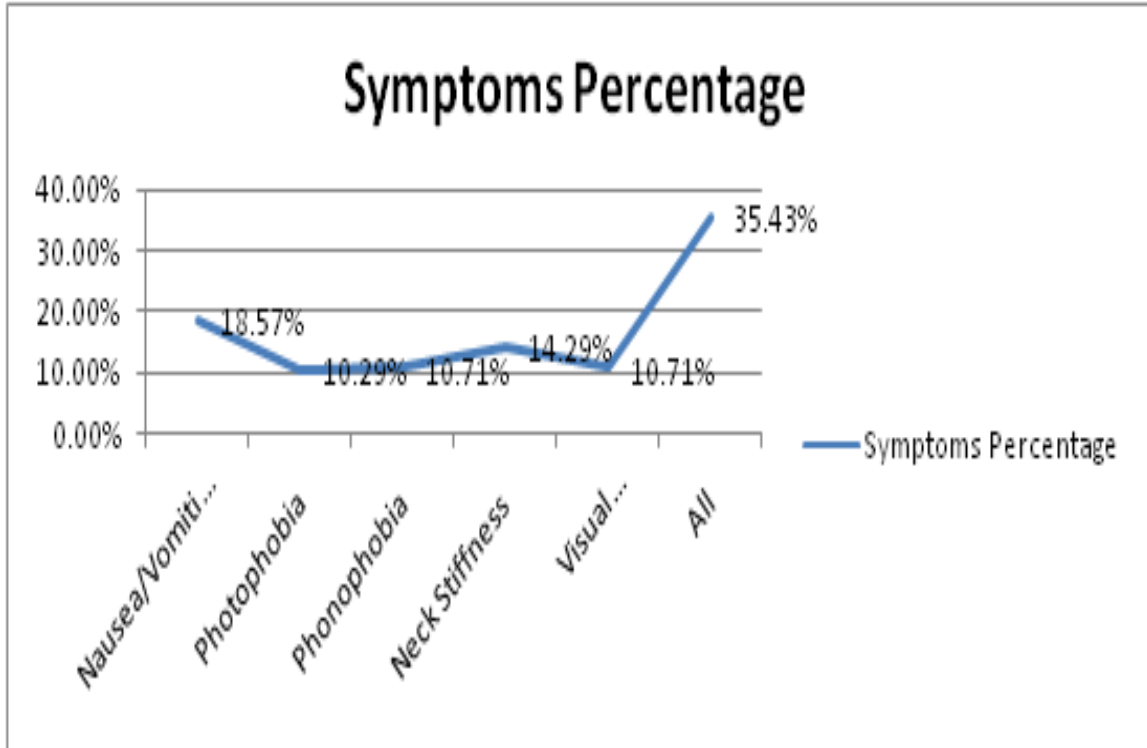


Fig 1: Percentage of Migraine according to Symptoms

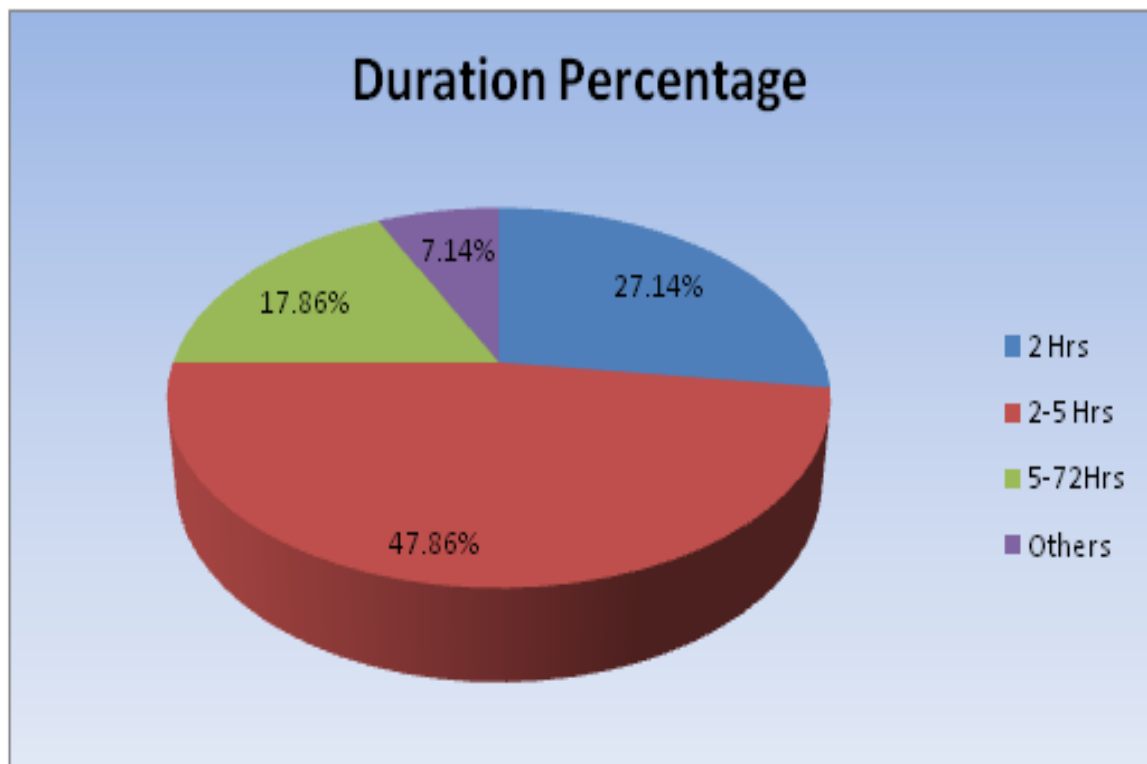
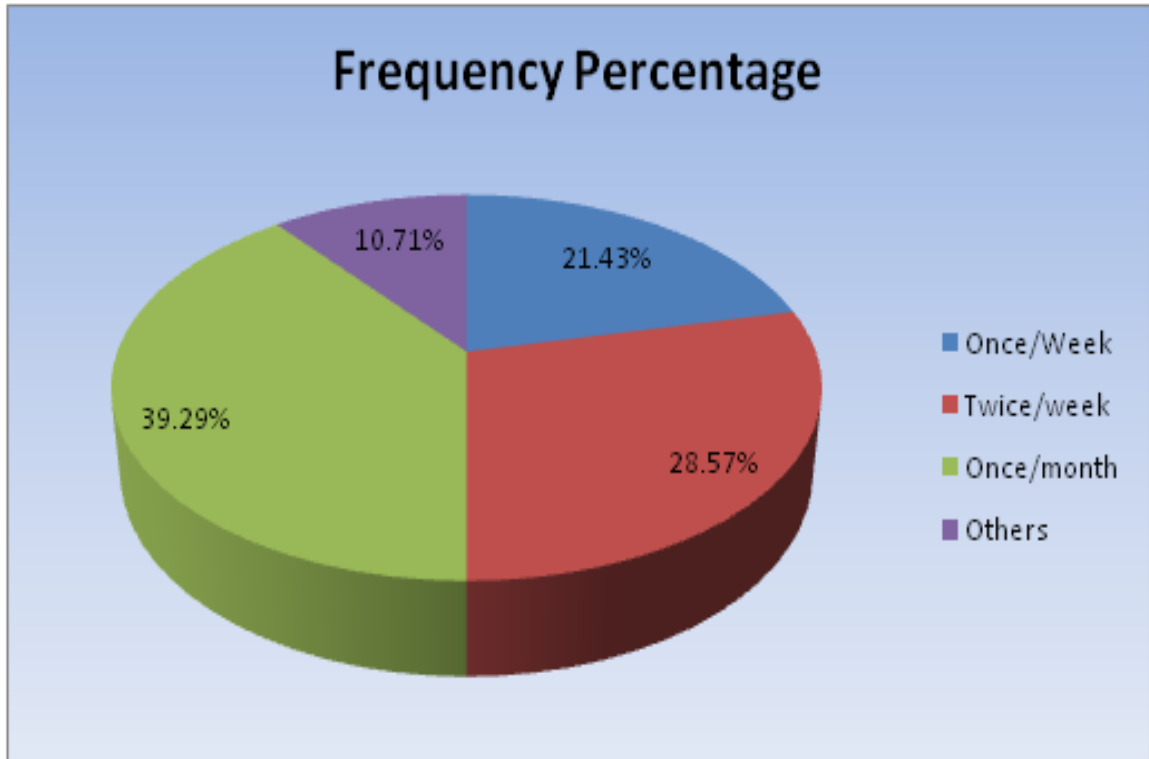


Fig 2: Percentage of Migraine according to Duration of pain



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Figure 3. Percentage of Migraine according to Frequency

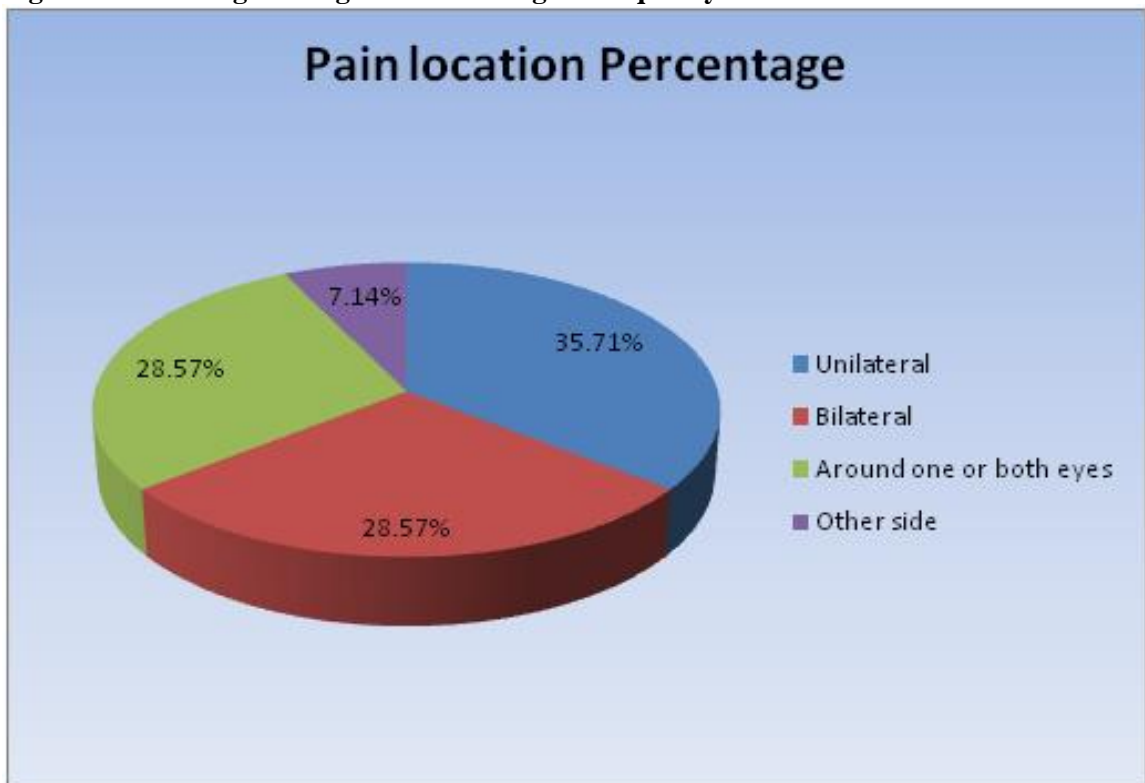


Fig 4: Percentage of Migraine according to Pain location

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