	<p>International Journal of</p> <h1>Innovative Drug Discovery</h1> <p>e ISSN 2249 - 7609 Print ISSN 2249 - 7617</p> <p><a href="http://www.ijidd.com">www.ijidd.com</a></p>
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## PREVALENCE AND AWARENESS OF MIGRAINE IN GENERAL PUBLIC OF KARACHI

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### ABSTRACT

Migraine is a very common neurobiological headache disorder that is caused by increased excitability of the CNS. Diagnosis is based on the headache's characteristics and associated symptoms. It affects patients' quality of life and impairs work, social activities, and family life. According to WHO, migraine is ranked as 19 along with all the disabling diseases. We have conducted survey on awareness and prevalence of migraine having the sample size of 200. Women are more prone to migraine attacks than men. Sensitivity to light and sound is found to be most common symptoms along with triggering factor of stress and poor sleep. Migraine is chronic daily headache which is severe, common and major health problem. It is highly aggravating which merits increased attention. With the increase in development of effective medications for migraines it is essential for healthcare provider to perform differential diagnosis between migraine and other types of headache and prescribe proper medication for migraine and to encourage patients to inform about the type of headaches.

**KEY WORDS:** Migraine, Headache, Photophobia, Phonophobia.

### INTRODUCTION

Migraine is a type of chronic daily headache, which is intense, pulsating and often unbearable [1-3]. There are several types of migraine, two main types are: migraine with aura (classic migraine) and migraine without aura (common migraine). Migraine with Aura symptoms (sensory disturbances, transient visual, motor disturbance or language disturbances) remains for 15 minutes or one hour and most commonly occurs before onset of headache. Migraine Without aura symptoms (nausea, vomiting, and sensitivity to light, sound, touch, odour and blurred vision) lasts for 4 to 72 hours. Migraine is characterized by unilateral headache.<sup>[4]</sup> The pain is most commonly felt behind the eye, the face, the neck, the shoulder and the jaw.<sup>[1]</sup> Migraine attack is divided into five phases i.e. Prodromal or warning phase; definite physical and mental changes which ends after 1 to 24 hours, for example fatigue, desire of sweet foods, mood alter, sensation of dehydrated and a rigid neck. Aura phase; changes include visual disorder (flashing lights) or sensory warning (pins and needles); it ends after 5 min to 1 hrs. Headache; it include head pain usually severe, pulsating, intolerable. Some

experiences pain over the forehead, some have unilateral pain, and some have bilateral pain. Symptoms include nausea, vomiting, photophobia and phonophobia or both, which last for 4 hours to 3 days. Resolution phase; In this phase, usually the sufferer pain goes away slowly but sometimes abruptly when sufferer weeps a lot or when he is unwell. 1 or 2 hours sleep or even few minutes sleep for some children is sufficient to cure the attack. Postdromal or recovery phase; the sufferer experiences similar or often paralleled symptoms as that of the first phase. The symptoms end up in hours or days [4-7]. Migraine can usually occur from environmental and genetic factors. Food is the most triggering factor other than fluctuation hormonal levels. It is most commonly occurs between the age of 20 to 50 years. It affects more boys than girls before puberty but often 2-3 times more in elderly women than men. After menopause, there is a considerable reduction in migraine [8-13]. Approximately one in five women and one in 16 men experiences migraine. It has been observed that patients of migraine has increased, corresponding with the increase in population, from 23.6 million in 1989 to 27.9 million in

1999, which indicates high prevalence of migraine [14]. One of the study indicated that women are more prone to migraine attacks than men [15]. One of the study concluded that 88 % of sufferer with a history of "sinus" headache usually have migraine-type headache. In patients with periodic headaches without purulent discharge or fever, the occurrence of sinus-area symptoms may be element of the migraine attack. Sinus headache patient faces the symptoms for e.g. ocular symptoms, sinus pain, nasal symptoms and sinus pressure, similar migraine [16]. One of the researcher documented that according to HIS, tension-type headaches are frequently harmonize with migraine-like symptoms, such as sensitivity to sound or light and frustration by activity. On the contrary, numerous migraine attacks harmonize with tension headache-like symptoms like neck pain. For the management of headache patients, the health-care provider should be careful and aware of these overlaps [17]. Smith TR concluded; when the clinicians diagnose the headache patients, he should be aware of the possible presence of chronic daily headache occurring from uncontrolled migraine or overuse of medication. Moreover, disability evaluation tools and patient diaries can help recognize a pattern of headache-related disability headache indicative of medication-overuse headache or migraine [18]. It has been reported that episodic migraine is more progressively giving rise to chronic migraine having a rate of 15 or more attacks a month. Migraine affects the individual's quality of life (QOL); it also affects their workplace, and their families. In 2008, the prevalence of migraine is increasing in the population of United States about 28 million people with migraine and 12% in developed countries that are estimated as low. Disruptive migraine patients usually delay their visit to a physician or may habitually overuse self-prescribed medications which postpone their correct and appropriate diagnosis and treatment [19]. One of the studies reported that migraine with and without aura are link with both cardiovascular diseases and chances for cardiovascular diseases [20]. Researcher reviewed in Dutch population that the occurrence of migraine in menses causes the migraineurs to limit their routine activities. Oral contraceptives usage appeared to decrease the incidence of menstrual problems but not the incidence of migraine and headache [21]. According to Mueller LL, non pharmacological measures, prophylactic medications and abortive are considered as comprehensive treatment approach for migraine. For successful outcomes, inform the patients about practical treatment expectations, medications overuse, avoidance of caffeine and delayed effectiveness of medications is critical [22]. Researcher evaluated that adults with chronic migraine PREEMPT 2 demonstrate that onabotulinumtoxin A can be use prophylactically for headache. onabotulinumtoxinA treatments can be well tolerated and safe after repeated use [23]. Aim of our study is to analyse the prevalence of migraine in general public and to get the information that

how much people know about it and how they respond to this bad headache

## METHODOLOGY

### Sample

Responses to a feedback questionnaire were obtained from 200 individuals (100 male & 100 female) of Karachi city, the individuals were selected on random basis.

### Materials

Questionnaire based on 15 closed ended questions were asked form the general public covering awareness & prevalence of migraine. Potential of migraine and its awareness and prevalence were graphically analyzed on MS excel by gender, age group, duration, occurrence, symptoms, emotional and physical factors, inheritance factor and treatment pattern.

## RESULT AND DISCUSSION

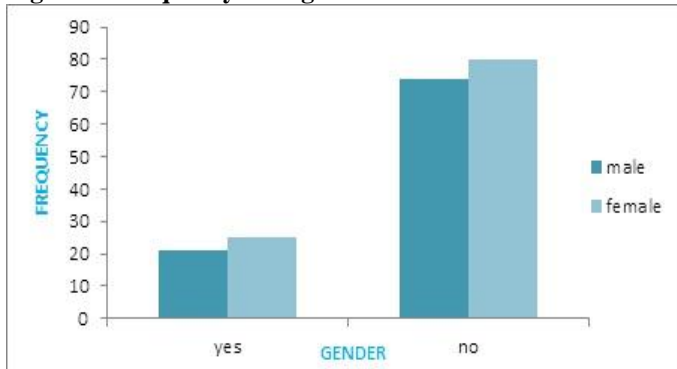
Migraine is a common exhausting disorder with a complex and heterogeneous composition. It presents with perennial headache attacks, allied symptoms of vegetative disorders, and hypersensitivity of various functional systems of the CNS. The ICHD-II point out attack-related features including localization, pain intensity and features as well as nausea/vomiting and sensitivity to light and sound to diagnose migraine. However, in addition more general events are considered typical for migraine for instance severity of migraine such as presence of aura, attack frequency ,age at onset and family history, and some triggering factors such as hormones, food and drugs.

We have conducted survey on awareness and prevalence of migraine having the sample size of 200 (100 females and 100 males). According to our study a total of 46% patients reported migraine i.e. 21% of the males and 25% of the females (fig 1) out of which 52.17% of the patient having migraine with inheritance and 47.82% of the patient having migraine without inheritance (fig 2). If we want to differentiate between age group our study shows that adults are more prone to migraine than teens and geriatrics (fig 3). Majority of patients experiences migraine once a week (43.5%) or once a month (32.6%) and rarely in 3-6 months (13.04%) and once a year (10.9%) (Fig 5) Duration of migraine varies from person to person, (56.5%) of patients experienced migraine for 4 hours, (8.7%) for 8 hours, (4.3%) for 8-16 hrs, (4.3%) for 17-24 hours (Fig 4). Most common symptoms experience by migraineurs are sensitivity to light (32.6%) and sensitivity to sound (43.7%), and some of the patients also experiences nausea (17.3%) and sensitivity to smell (15.2%) (fig 6). According to our survey most frequent triggering factor observed in migraineurs are stress (52.1%), poor quality of sleep (50%), tiredness (28.2) and depression(23.9%), and the rare factors are anxiety(6.5%), tension (6.5%), poor posture (6.5%), excitement (2.1%), shock (2.1%), low blood sugar (2.1%)

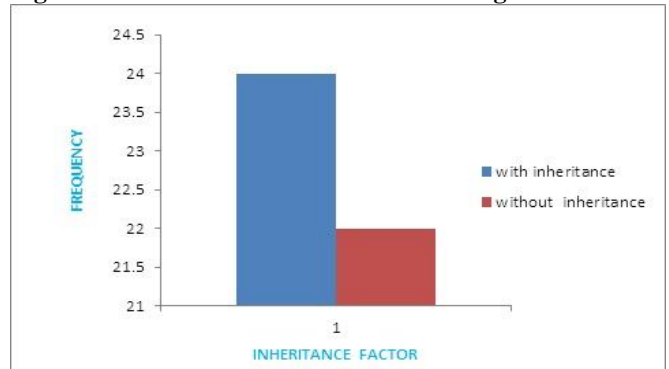
(Figure 7,8). most of migraineurs use only prescribed medication such as paracetamol(11%), disprin (11%) , nuberol (44%), lexotanil (22%), valrawine (11%) or only self medication such as panadol (63%), ponstan forte (19%),

disprin (6%), excedrin (6%) and advil (6%) but some of the migraineurs use both prescribed and self medication(fig 9,10).

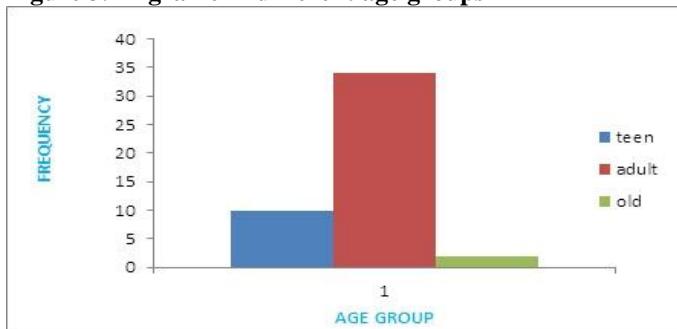
**Figure 1. Frequency of migraine in males and females**



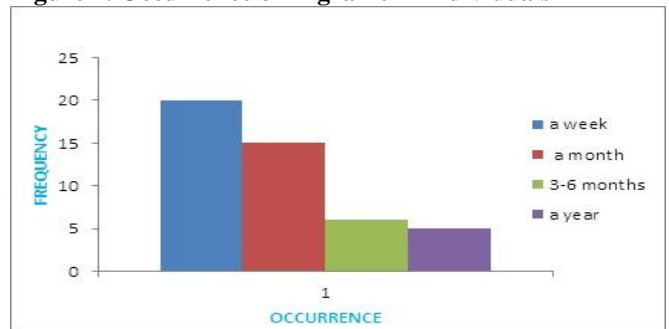
**Figure 2. Inheritance factor involved in migraine**



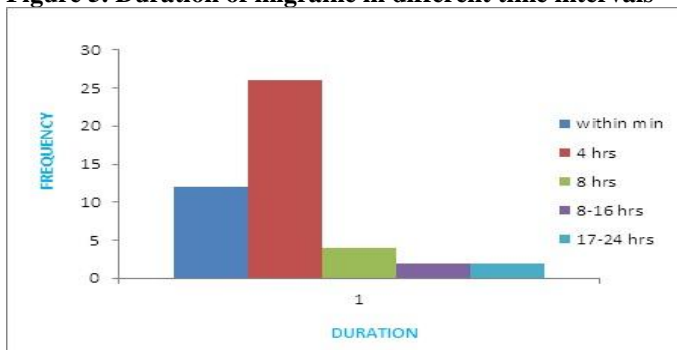
**Figure 3. Migraine in different age groups**



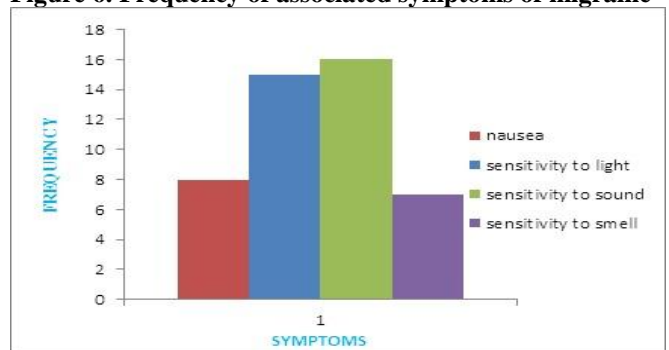
**Figure 4. Occurrence of migraine in individuals**



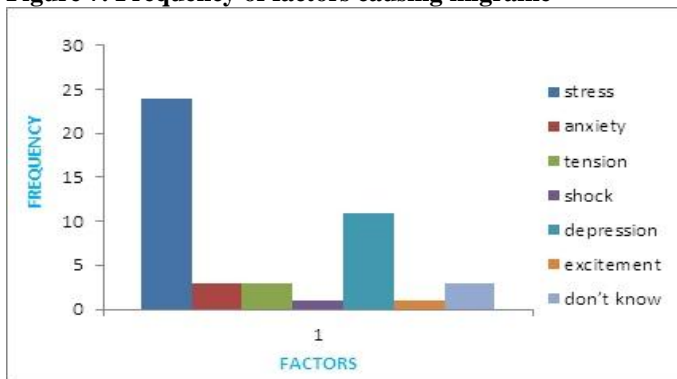
**Figure 5. Duration of migraine in different time intervals**



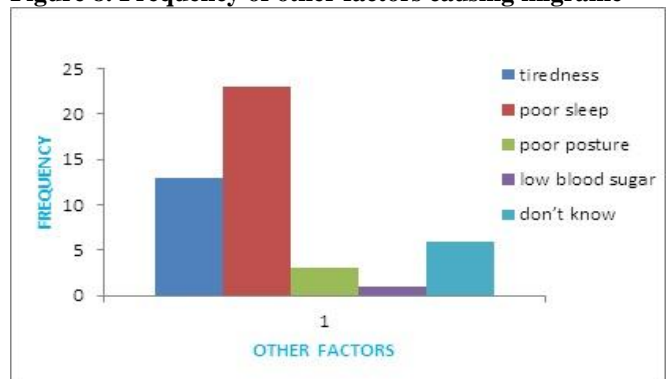
**Figure 6. Frequency of associated symptoms of migraine**

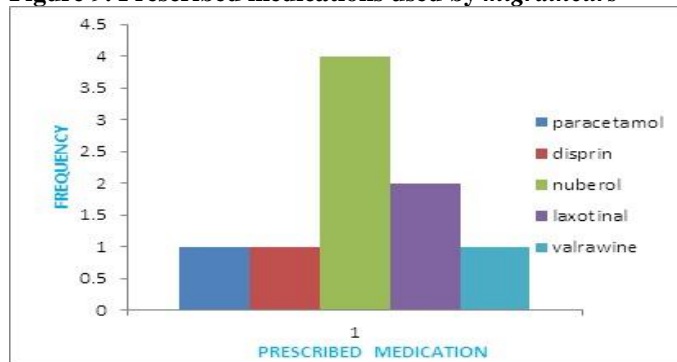
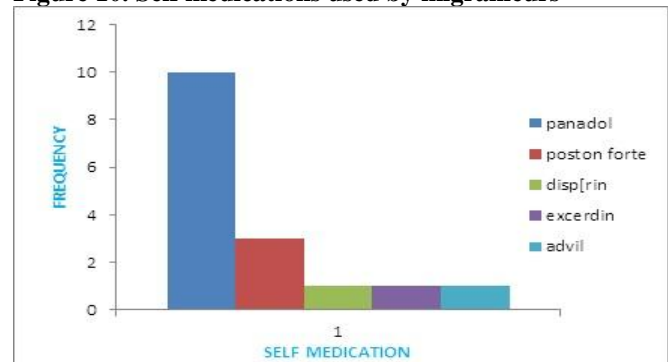


**Figure 7. Frequency of factors causing migraine**



**Figure 8. Frequency of other factors causing migraine**



**Figure 9. Prescribed medications used by migraineurs****Figure 10. Self medications used by migranieurs**

## CONCLUSION

Through our study we conclude that the migraine prevalence is greater among women than men. Inheritance plays an important role in causing migraine. Mostly adults suffer from migraine, with the most common symptoms of sensitivity to light and sound. Stress and poor sleep are found to be most triggering factor. Patients use both self and prescribed medication for the treatment of migraine. Patient should consult doctors for diagnosis of migraine so that they

can differentiate whether they have severe headache or migraine and they should take proper prescribed medication for migraine. We also conclude that there is need to educate the people, counseling them, promoting awareness and perform activities to get further knowledge. Because the research base studies are fruitful, strengthen the hope and banish the feelings of hopelessness in those who often accompany these types of disorders.

## REFERENCES

1. Sorbi MJ. Prodromal functioning of Migraine Patients Relative to Their Houtveen Interictal State- an Ecological Momentary Assessment Study. *PLoS ONE* 8(8), 2013, e72827.
2. Rowland, Belinda; Frey, Rebecca. *Migraine Headache*. Gale Encyclopedia of Alternative Medicine, 2005.
3. Stewart J Tepper, Deborah E. Tepper chapter 1 diagnosis of migraine and tension type headache. *The Cleveland Clinic Manual of Headache Therapy*, 2014, 5-6
4. Stephen D. Silberstein Director, Philadelphia, La Jolla Donald J. Dalessio .Primary headache disorders. *Wolff's Headache and Other Head Pain*. 2001, 10-11
5. Effect of homeopathic medicines in the treatment of migraine, Dissertation submitted to S.Vijaya Shankar(CRRI), Session: 2008-2009
6. Robert Lisak, Daniel Truong, William Carroll, Roongroj Bhidayasiri. *International Neurology* , A clinical; approach, September 2009.
7. David W. Dodick and J. Jay Gargus .Why Migraines Strike. *Scientific American Magazine*, 2008.
8. Maria Piane, Patrizia Lulli, Ivano Farinelli, Simona Simeoni, Sergio De Filippis, Francesca Romana Patacchioli, and Paolo Martelletti .Genetics of migraine and pharmacogenomics: some considerations *The Journal of Headache and Pain*, 8(6), 2007, 334-339.
9. Kadriye Alpay, Mustafa Ertaş, Elif Kocasoy Orhan, Didem Kanca Üstay, Camille Lieners, and Betül Baykan .Diet restriction in migraine, based on IgG against foods: A clinical double-blind, randomised, cross-over trial. *Cephalalgia*, 30(7), 2010, 829–837.
10. Lay CL, Broner SW. Migraine in women. *Neurol Clin*, 27(2), 2009, 503-11.
11. Stovner LJ, Zwart JA, Hagen K, Terwindt GM, Pascual J. Epidemiology of headache in Europe. *Eur J Neurol*, 13(4), 2006, 333-45.
12. Simona Sacco, Silvia Ricci, Diana Degan, and Antonio Carolei. Migraine in women: the role of hormones and their impact on vascular diseases. *J Headache Pain*, 13(3), 2012, 177–189.
13. Necdet Karlı, Betül Baykan, Mustafa Ertaş, Mehmet Zarifoğlu, Aksel Siva, Sabahattin Saip, Güven Özkaya and Turkish Headache Prevalence Study Group. Impact of sex hormonal changes on tension-type headache and migraine: a cross-sectional population-based survey in 2,600 women by. *J Headache Pain*, 13(7), 2012, 557–565.
14. Richard B. Lipton MD, Walter F. Stewart MPH, PhD, Seymour Diamond MD, Merle L. Diamond MD4, Michael Reed PhD Headache, Prevalence and Burden of Migraine in the United States: Data from the American Migraine Study II. *The Journal of Head and Face Pain*, 41(7), 2001, 646–657.
15. Gabriel E. Ofowwe FWACP, Antoinette N. Ofili FWACP. Prevalence and Impact of Headache and Migraine among Secondary School Students in Nigeria. 50(10), 2010, 1570–1575.

16. Curtis P. Schreiber; Susan Hutchinson; Christopher J. Webster; Michael Ames; Mary S. Richardson; Connie Powers. Prevalence of Migraine in Patients with a History of Self-reported or Physician-Diagnosed "Sinus" Headache, *Arch Intern Med*, 164(16), 2004, 1769-1772.
17. Kaniecki RG. Migraine and tension-type headache: an assessment of challenges in diagnosis. *Neurology*, 9(6), 14, 58, 2002.
18. Smith TR. Assume it is migraine unless proven otherwise. *Postgrad Med*, 117(5), 2005, 7-16.
19. Brandes JL. Headache. The migraine cycle: patient burden of migraine during and between migraine attacks. 48(3), 2008, 430-41.
20. Bigal ME, Kurth T, Santanello N, Buse D, Golden W, Robbins M and Lipton RB. Migraine and cardiovascular disease: A population-based study. *Neurology*, 74(8), 2010, 628-635.
21. Couturier EGM, Bomhof MAM, Knuistingh Neven A, Van Duijn NP. Menstrual migraine in a representative Dutch population sample: prevalence, disability and treatment. *Cephalgia*, 23(4), 2003, 302-308.
22. Mueller LL. Diagnosing and managing migraine headache. *J Am Osteopath Assoc*, 10(6), 2007, ES10-6.
23. Diener HC, Dodick DW, Aurora SK, Turkel CC, De Gryse RE, Lipton RB, Silberstein SD, Brin MF. On behalf of the PREEMPT 2 Chronic Migraine Study Group. Onabotulinumtoxin A for treatment of chronic migraine, January 26, 2010.