



## LIST OF ABBREVIATIONS USED

<b>Abbreviation</b>	<b>Full Form</b>
TTH	Tension-Type Headache
TAC	Trigeminal Autonomic Cephalalgia
MRI	Magnetic Resonance Imaging
CT	Computed Tomography
WHO	World Health Organization
GBD	Global Burden of Disease
ICHD	International Classification of Headache Disorders
MIDAS	Migraine Disability Assessment
HIT-6	Headache Impact Test-6
PHQ	Patient Health Questionnaire
GAD	Generalized Anxiety Disorder
SD	Standard Deviation
IQR	Interquartile Range
SPSS	Statistical Package for the Social Sciences
YLD	Years Lived with Disability

## ABSTRACT

**Introduction:** Headache is a prevalent neurological disorder and a leading cause of disability worldwide, with a significant impact on the quality of life. Despite the high global prevalence, limited data is available on primary headaches in the Bundelkhand region of Central India.

**Objectives:** This study aims to document the clinical profile, prevalence, and associated comorbidities of different types of primary headaches in the adult population of the Bundelkhand region.

**Methods:** A cross-sectional study was conducted at Maharani Laxmi Bai Medical College, Jhansi. Adult patients presenting with primary headaches were assessed for sociodemographic details, headache characteristics, and associated comorbidities. The diagnosis was made based on the International Classification of Headache Disorders (ICHD-3) criteria. Migraine Disability Assessment (MIDAS), Allodynia Symptom Checklist-12 (ASC-12) were used to assess disability and symptoms. Generalized Anxiety Disorder score (GAD), Patient Health Questionnaire (PHQ), Perceived Stress Scale (PSS) were used to assess anxiety and depression.

**Results:** Out of 380 participants, tension type headache was the most common diagnosis, affecting 56.6% of the population, followed by migraine (41.1%). Most migraine patients fell into MIDAS Grade II (37.8%) and Grade III (31.4%), indicating moderate to severe disability. Women were more likely to suffer from primary headache disorders compared to men. A significant association was found between migraine and generalized anxiety disorder ( $p < 0.001$ ).

**Conclusion:** Migraine and tension-type headaches are the most common primary headaches in the Bundelkhand region, with a higher prevalence among females. The findings highlight the need for improved diagnostic and treatment protocols to reduce the disability burden caused by primary headaches.

**Keywords:** Primary headaches, Migraine, Tension-type headache, Disability, Bundelkhand region

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# INTRODUCTION

## Background

Headache is a prevalent issue that prompts patients to seek medical help worldwide. It is a leading cause of disability, surpassing other neurological problems. It is estimated that nearly half of all adults have experienced a headache within the past year. <sup>[1]</sup>

It is crucial for healthcare providers to distinguish between primary and secondary headaches in order to promptly address more serious causes, leading to improved quality of life and reduced disability. <sup>[2]</sup>

Primary headaches are headaches that do not stem from any structural abnormalities in the intracranial region, unlike secondary headaches. Primary headache pain typically recurs in a specific pattern and is often triggered. Usually, there are no symptoms at all between attacks of a typical primary headache. Headaches can be secondary, especially if they occur shortly after previous symptoms or other causes. <sup>[3,4]</sup>

The classification system developed by the Headache Classification Committee of the International Headache Society (IHS) categorizes headaches into primary, secondary, and cranial neuralgia. There are various types of primary headaches, including migraine, tension-type headache, cluster headache with trigeminal/autonomic cephalgia, and other primary headaches. <sup>[5]</sup>

There are several types of primary headache disorders, such as migraine, tension-type headache (TTH), trigeminal autonomic cephalalgias (TACs), and other primary headache disorders. Secondary headaches encompass a range of conditions, such as intracranial space-occupying lesions (SOLs), infections of the central nervous system like meningitis or encephalitis, subarachnoid hemorrhage, giant-cell arteritis, cerebral venous thrombosis, and idiopathic intracranial hypertension. <sup>[6]</sup>

The Global Burden of Disease Study 2010 (GBD2010) highlighted the high prevalence of TTH as a disorder worldwide, with migraine closely following. However, when it comes to causing disability migraine surpasses TTH significantly. [7]

### **Need for the study**

Headache is a significant cause of morbidity globally, yet it has received little attention in developing countries. The majority of clinical and epidemiological studies have been conducted in developed countries. However, there is limited literature available to support treatment guidelines or public health interventions for managing headaches in low- and middle-income countries, which are home to 85% of the global population. [8,9]

Despite the prevalence of headaches as a medical complaint, many cases still go undiagnosed and untreated in practice. Even in modern times, some physicians still believe that there are limited options available for patients suffering from headaches. It's worth noting that the field of headache research has made significant progress in the past decade. Over 90% of the headaches observed in practice are now recognized as primary headaches, which means they are genuine biological issues that can potentially be treated. This evidence underscores the importance of understanding and addressing primary headaches. [10] It is crucial for clinicians to avoid any mistakes when it comes to making accurate diagnoses and selecting the appropriate treatment options. Understanding the headache patterns of patients seen in specialized medical centers can greatly assist in improving the diagnostic and treatment procedures at lower levels of care. This knowledge can lead to more effective and tailored treatment for these cases.

[10]

## **Problem Statement**

This study aims to document the patients who present with various types of primary headaches in the Bundelkhand region. It also aims to understand their clinical profile and diagnostic methods. The ultimate objective is to effectively allocate resources for improved patient care and prevention.

## **AIM AND OBJECTIVES**

- ) To determine the sociodemographic and clinical profile of different types of primary headache in adult population of Bundelkhand region.
- ) To estimate comorbidity and disability associated with migraine.

## REVIEW OF LITERATURE

In the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2019 study, it was found that headache disorders have a significant impact on individuals' quality of life. They ranked highly among various conditions, coming in third out of 369. This was particularly true for people aged 15-49, where they ranked first and accounted for 8% of all-cause years lived with disability (YLDs). Migraine, ranked second and accounted for 7.3% of all-cause YLDs. [11,12]

Based on the third edition of the International Classification of Headache Disorders published in 2018, headaches can be categorized into primary headaches, secondary headaches, neuropathies or facial pains, and other headaches. Primary headache disorders arise from independent patho mechanisms rather than being caused by underlying diseases of the body. In contrast, secondary headaches typically occur as secondary symptoms resulting from organic diseases or infections. Due to their elusive origins and the intense and persistent pain they cause, primary headache disorders often progress into chronic headaches.

Primary headache disorders, such as migraine, cluster headache (CH), and tension-type headache (TTH), are responsible for a significant amount of disability on a global scale. According to the data, it was found that the worldwide occurrence of migraine was approximately 14.0%, with males at 8.6% and females at 17.0%. As for tension-type headaches (TTH), the prevalence was 26.0%, with males at 23.4% and females at 27.1% [13]. Furthermore, these headaches, particularly migraine, are frequently associated with other conditions such as depression, epilepsy, stroke, and myocardial infarction. These comorbidities can result in significant disabilities, hindering both work and daily activities, and imposing a substantial yet often overlooked socioeconomic burden. Furthermore, it is not uncommon for patients with headaches to be clinically misdiagnosed. There is a

tendency to over diagnose TTH in the emergency department, resulting in delayed treatments for patients with migraine. According to a study, 13.8% of patients with migraine were misdiagnosed with TTH.<sup>[14]</sup>

**Table 1. The International Classification of Headache Disorders, 3rd Edition (Beta Version) <sup>[15]</sup>**

Part 1: The Primary Headaches

1. Migraine
2. Tension-type headache
3. Trigeminal autonomic cephalgia
4. Other primary headache disorders

Part 2: The Secondary Headaches—Headache (or Facial Pain) Attributed to:

5. Trauma or injury to the head and/or neck
6. Cranial or cervical vascular disease
7. Nonvascular intracranial disorder
8. A substance or its withdrawal
9. Infection
10. Disorder of homeostasis
11. Disorder of the cranium, neck, eyes, ears, nose, sinuses, teeth, mouth, or other facial or cervical structure
12. Psychiatric disorder

Part 3: Painful Cranial Neuropathies, Other Facial Pains, and Other Headaches

13. Painful cranial neuropathies and other facial pain
14. Other headache disorders

## **PRIMARY VERSUS SECONDARY HEADACHE**

A primary headache is characterized by the absence of any identifiable underlying cause. Secondary headache occurs when another condition causes strain or inflammation on pain-sensitive structures. Secondary headaches can be caused by psychiatric conditions. There are several types of primary headaches, including migraine, tension-type headache, and cluster headache. Secondary headaches, such as those caused by infection, vascular disease, or trauma, are more commonly experienced. Headache is a rare symptom in patients with brain tumors, occurring in only 1% of cases.<sup>[16]</sup>

## **EVALUATION**

Gaining a comprehensive understanding of the patient's headache history is crucial for accurately diagnosing the condition. Information collected from history is compared with diagnostic criteria to find the most accurate diagnostic match. The historical records provide information on the headache, including its frequency, duration, characteristics, severity, location, quality, and factors that trigger, worsen, or alleviate it. Considering the age of onset is crucial, and it is essential to investigate any family history of headaches. It is crucial to gather information on lifestyle factors such as diet, caffeine consumption, sleep patterns, work routine, and personal stress. Lastly, it is beneficial to include information about any additional conditions that may be present, such as a sleep disorder, depression, anxiety, or an underlying medical condition.

The evaluation of headache relies on conducting a comprehensive neurological examination. Other aspects that can be explored are the analysis of the outer scalp vessels, neck vessels, teeth and bite, the temporomandibular joints, and the muscles in the neck and shoulders. Peri cranial muscle tenderness is considered a significant physical indicator when diagnosing tension-type headaches.<sup>[15]</sup>



## **Essential Elements of the Headache History**

- Family history of migraine
- Childhood migraine proxy symptoms: carsickness, gastrointestinal complaints
- Age of onset
- Frequency, severity, and tempo over time
- Triggering, aggravating, or alleviating features
- Autonomic features
- Aura features
- Current and prior treatments
- Lifestyle features
- Comorbid conditions

## **The Diagnostic Evaluation—Indications for Imaging**

In the context of migraine with a normal neurologic examination, it is highly probable that imaging results will be unremarkable. Unfortunately, there is currently no diagnostic test available for migraine. <sup>[17,18]</sup> There are still valid reasons to use imaging in the assessment of headaches, and it is important to consider imaging when certain warning signs are present.<sup>[17]</sup>

## **Headache “Red Flags” That Could Indicate Need for Evaluation <sup>[17]</sup>**

- New headache in older patients
- Abnormal neurologic examination including papilledema and change in mental status
- New change in headache pattern or progressive headache
- New headache in the setting of HIV risk factors, cancer, or immunocompromised

status

- Signs of a systemic illness (eg. fever, stiff neck, rash)
- Triggered by cough, exertion, Valsalva maneuver
- Headache in pregnancy/postpartum period
- First or worst headache

In practice, a significant number of individuals with chronic headache conditions often undergo imaging procedures at least once. Shockingly, an astounding amount of money, approximately 1 billion dollars annually, is wasted on unnecessary brain imaging studies.<sup>[19]</sup>

### **Approach to Treatment**

The treatment approach for many secondary headaches is centered around addressing the underlying cause, such as treating a sinus infection. Many secondary headaches, like posttraumatic headaches, are often treated similarly to migraine due to their similar characteristics.

The approach to treating migraine and other primary headaches varies depending on the severity of the symptoms and the level of disability experienced. For mild and infrequent symptoms, it's often recommended to start with lifestyle modifications, stress management techniques, and over-the-counter abortive medications. <sup>[20,21]</sup>

Prescription medications can be included as necessary to prevent disability and preserve functionality. There is a clear differentiation between abortive and preventive medication when it comes to managing headaches. Treatment options for managing attacks include abortive medications to address individual episodes, while preventative medications aim to decrease the frequency and intensity of these attacks, ultimately aiming to minimize the impact on daily functioning.

## **IMPORTANT TYPES OF HEADACHES**

### **Migraine**

Migraine is a debilitating condition characterized by headache attacks that can last anywhere from 4 to 72 hours. These attacks are typically marked by a one-sided location, throbbing pain, worsening with regular physical activity, sensitivity to light and sound, as well as nausea and vomiting. [22,23]

Migraine is a prevalent form of headache. Around 12% of people experience acute migraine attacks at least once, while chronic migraine affects approximately 2.5% of the world's population. Migraine is a leading cause of temporary disability on a global scale.[24]

There are two main subtypes of migraine: migraine with aura and migraine without aura. Unlike migraine without aura, migraine with aura presents with a headache accompanied by different local neurological and visual symptoms. Photopsia, photophobia, and temporary visual disturbances are frequently experienced in these cases. Other symptoms that may be observed include sensitivity disorders, vestibular symptoms, or temporary paresis. Uncommon and unusual types of migraine encompass familial hemiplegic migraine, basilar migraine, ophthalmoplegic migraine, and exceptional retinal migraine.[25]

There are four distinct phases that make up the overall clinical picture of migraine: prodrome, aura, headache phase, and postdrome.

A prodrome can occur in a significant number of patients, appearing before the onset of a headache by varying lengths of time. This phase can manifest in a range of symptoms such as depression, hyperactivity, cognitive changes, frequent urination, irritability, euphoria, neck stiffness or pain, and fatigue. Cravings for certain foods, like chocolate,

can sometimes be mistakenly blamed for triggering an attack, when they may just be a natural part of the onset. Some patients may experience an aura, although it may not occur with every attack.

The pain experienced in migraine headaches is often described as being on one side of the head, with a severity ranging from moderate to severe. While individuals tend to have consistent patterns in their headache attacks, there can be some variations present. Afterwards, the headache may be accompanied by a postdrome phase, which is marked by difficulty focusing and a sense of exhaustion or feeling drained. Some patients have reported feeling refreshed and rejuvenated after an episode.<sup>[26]</sup>

It is worth noting that there is a higher prevalence of migraine among women compared to men, with women being affected three times more often.<sup>[27]</sup> Additionally, the highest incidences of migraine are observed in young patients between the ages of 30 and 40 years.<sup>[28]</sup> Recent studies have provided evidence suggesting a genetic factor that plays a role in the susceptibility to migraine.<sup>[29]</sup>

There are variations in genetic susceptibility factors for migraine with and without aura.<sup>[30]</sup> Additional factors that contribute to the risk include the presence of psychological and psychiatric disorders,<sup>[30]</sup> hormonal status, myofascial syndromes, and exposure to adverse environmental factors such as nutrition or stress. <sup>[31-34]</sup>

There have been multiple studies that have identified various factors that can potentially trigger migraine attacks. There are various factors that can have an impact on our well-being. These include stress, changes in the menstrual cycle, weather fluctuations, disruptions in sleep patterns, consumption of alcohol and other dietary substances, fluctuations in barometric pressure, and even periods of starvation. <sup>[33]</sup>

The prevailing theory on the pathophysiology of migraine proposes a neurovascular

conflict that involves the trigeminal nerve and underlying neuroinflammation. This conflict leads to changes in vascular tone, starting with vasospasm and followed by vasodilation.

[35-37]

The pathophysiology of migraine involves a potential genetic predisposition that causes the brain to be highly sensitive to various internal and external changes, which can then trigger headaches. These triggers have an impact on the trigeminovascular system, which consists of both peripheral and central nervous system components. Activation of the trigeminovascular system leads to the release of certain substances that trigger inflammation and enhance neural activity in various parts of the brain. This process, known as central sensitization, can worsen symptoms and reduce the brain's ability to control or stop headaches. [38,39]

The role of an imbalance in the system of serotonin and norepinephrine, along with other monoamines, is believed to be significant in the development of migraine.<sup>[40]</sup> Over the past few years, there has been growing recognition of CGRP's role as a significant factor in the development of migraine. The role of CGRP in the trigeminovascular system is significant, acting as a mediator between vascular reactions and the perception of changes in vascular tone as a pain stimulus.<sup>[41]</sup> Studies have demonstrated a notable elevation in CGRP levels among individuals suffering from migraine in comparison to those who are healthy.<sup>[41]</sup> The release of CGRP from the primary afferent fibers in the trigeminal ganglion is strongly linked to the nitric oxide system and other substances that lead to sensitization of peripheral and central neurons. This sensitization is responsible for the shift from acute to chronic forms of migraine. <sup>[42,43]</sup> The discovery of CGRP has revolutionized the field of migraine treatment, with CGRP antibodies and receptor antagonists emerging as the most effective options for chronic migraine. <sup>[44,45]</sup>

Chronic migraine, characterized by frequent headaches occurring on more than 15 days

per month for over 3 months, is a condition that affects around 3% of the population. It is also responsible for most cases seen in specialized headache centers, accounting for 70%-80% of patients. Implied in the diagnosis is a transformation process from a previous pattern of episodic migraine that can span over months to years. Although the headache pattern that emerges may lack certain distinguishing characteristics, a diagnosis of migraine requires experiencing migraine features on 8 days per month. [15,46]

### **International Classification of Headache Disorders (ICHD) Chronic Migraine [5]**

- A. Headache (tension-type-like and/or migraine-like) on 15 days per month for >3 months and fulfilling criteria B and C
- B. Occurring in a patient who has had at least five attacks fulfilling criteria B-D for 1.1 migraine without aura and/or criteria B and C for 1.2 migraine with aura
- C. On 8 days per month for >3 months, fulfilling any of the following:
  - a. Criteria C and D for 1.1 migraine without aura
  - b. Criteria B and C for 1.2 migraine with aura
  - c. Believed by the patient to be migraine at onset and relieved by a triptan or ergot derivative
- D. Not better accounted for by another ICHD-3 diagnosis

There are various medications that can be used to treat certain conditions. These include nonsteroidal anti-inflammatory agents, combination analgesics, antiemetic medications, and corticosteroids. It is generally advised to avoid using opioid medications and butalbital compounds due to the potential for overuse and rebound effects. There are several types of antimigraine agents available, including selective 5-HT<sub>1B/D</sub> serotonin agonists, known as triptans, and preparations containing ergotamine, such as

intravenous/intranasal dihydroergotamine.

Receiving treatment at the onset of the attack yields the most favorable outcomes.<sup>[47]</sup>

The characteristics of the headache, such as its intensity, how quickly it starts, and whether it is accompanied by early nausea or vomiting, can impact the selection of treatment options.

If the patient experiences headaches for more than 6 days, is impaired for 4 days, or completely disabled for 3 days each month despite abortive treatment, it is advisable to consider preventative medication. When starting preventive management, it is crucial to begin with a low dose and gradually increase it to minimize any potential side effects. It is also important to continue the treatment for an appropriate trial period, typically around 3 months, to ensure that any therapeutic effects that develop slowly are not missed.<sup>[48]</sup>

### **Tension-Type Headache**

TTH has a significant impact on individuals across the globe.<sup>[49]</sup>

According to a study conducted by Wrobel Goldberg et al., the lifetime prevalence of TTH falls within a wide range of 30 to 78%.<sup>[50]</sup> As per the European Headache Federation (EHF), TTH is a common experience for most individuals, while around 10% of people frequently suffer from recurring TTH episodes.<sup>[51]</sup>

Chronic TTH affects around 3% of adults and even some children in Europe, as mentioned in a study conducted by Steiner et al. in 2019. Due to its widespread occurrence, the socioeconomic impact of TTH is considerable.<sup>[50]</sup> According to research, there is a higher occurrence of frequent episodic and chronic TTH in women compared to men.<sup>[52]</sup> TTH is frequently seen in women between the ages of 15 and 49.<sup>[28]</sup>

TTH can be classified into two types: episodic and chronic. While occasional episodic TTH typically has minimal effects on an individual and tends to resolve on its own,

frequent episodic TTH can cause significant disability and may require medication for treatment.<sup>[53]</sup> Chronic TTH is characterized by occurring frequently, often daily, for an extended period. It may also be accompanied by mild nausea. Chronic TTH is a significant health condition that significantly impacts one's quality of life and often leads to disability.<sup>[53]</sup>

While genetics may contribute to the development of tension-type headache, it is believed that environmental factors have a more significant impact compared to migraine. Possible contributing factors include the sensitivity of peri cranial muscles, the presence of mood disorders, and mechanical issues with the spine and neck.<sup>[54]</sup>

Medication management options can be explored, considering the frequency and impact of the condition. Various over-the-counter analgesic agents, both simple and compound, have demonstrated effectiveness when combined with caffeine. There are several options for preventive agents, such as tricyclic antidepressant medications and different muscle relaxants.<sup>[55,56]</sup>

Muscle relaxants are commonly prescribed based on personal experiences and individual accounts. Previous recommendations for treating this type of headache included the use of selective serotonin reuptake inhibitors and selective norepinephrine reuptake inhibitors. However, research has demonstrated that these medications are not effective.<sup>[57]</sup> Although monoamine oxidase inhibitor drugs have demonstrated effectiveness, their usage is limited due to the possible occurrence of side effects.<sup>[58,59]</sup> Studies have been conducted on the effects of memantine, a glutamatergic N-methyl-d-aspartate receptor antagonist, in patients with chronic tension-type headache and chronic migraine, suggesting potential benefits.<sup>[60]</sup> For patients experiencing chronic daily headache with characteristics of both tension-type headache and migraine, the recommended approach to treatment may involve preventive measures commonly used



for managing migraine, which may include the use of onabotulinumtoxin A in certain cases.

For many patients, tension-type headaches can be quite challenging to treat. It often requires a combination of medications for immediate relief and long-term prevention, as well as non-drug approaches.<sup>[56]</sup>

### **Cluster headache**

These headaches are a specific type of primary headache disorders. They are characterized by short-lasting headaches that occur on one side of the head only. Along with the pain, there are also autonomic features such as tearing, runny nose, redness of the eyes, and drooping of the eyelid.

Cluster headaches tend to occur more frequently in young men, with a ratio of 3.5 to 1. It has been observed that smoking is prevalent among 65% of individuals who experience these headaches. The pain associated with cluster headaches is known to be extremely intense, often described as unbearable and agonizing. The episodes range in duration from 15 minutes to 3 hours, happening anywhere from every other day to as frequently as eight times a day. The individual appears to be highly unsettled and agitated, frequently experiencing excessive perspiration.

One notable aspect is the consistent timing of the attacks, which occur at the same time each day.

Alcohol consistently provokes an attack in nearly every instance. Cluster headache typically occurs in episodes, with frequent attacks lasting for several weeks to several months, followed by long periods of remission. The chronic variety involves persistent attacks that occur for a duration of one year or more, without any periods of being symptom-free or experiencing a remission that lasts longer than a month.<sup>[61]</sup>

Drug therapy is necessary for the treatment of cluster headaches.<sup>[62]</sup> Verapamil is commonly prescribed as the initial preventive treatment for cluster headaches. <sup>[62,63]</sup> If verapamil is not well-tolerated or does not produce the desired results, other options to consider are topiramate and lithium carbonate.<sup>[62]</sup> Various treatment options are available for the acute management of cluster headaches. These include triptans, high-flow oxygen, octreotide, and local anesthetics. These treatments have been studied and documented by researchers. <sup>[62,64,65]</sup> It is crucial for a doctor to promptly establish an effective treatment for cluster headache. Furthermore, alongside drug therapy, neuromodulation can be employed. It is crucial to regularly follow up with patients experiencing active cluster headaches. This is important for two reasons: to ensure that they continue to receive the most effective acute and preventative treatments, and to monitor for any potential side effects from the treatment.

### **Stimulus-Induced Headache**

Several primary headaches are classified based on their association with specific triggers. These headaches can be caused by cold exposure, like the well-known ice cream headache, external cranial pressure or traction (such as ponytail headache), or different forms of exertion.<sup>[66]</sup>

### **Thunderclap Headache**

This headache is likely to come on suddenly, reaching its peak intensity within just one minute. It can be quite severe. Even though there may not be an apparent cause in some patients, it is crucial to promptly rule out any potential structural or medical issues.

At present, thunderclap headaches can be categorized as either primary (benign or idiopathic) or secondary. Secondary causes include reversible cerebral vasospasm, subarachnoid hemorrhage, venous sinus thrombosis, hypertensive encephalopathy, and

pituitary apoplexy. [15,67,68]

### **New Daily Persistent Headache**

This is a unique and remarkable pattern of headache, initially described in 1986, and is generally not widely recognized beyond the field of headache medicine. While treatment options may not always yield significant results, it is crucial to identify this pattern to provide accurate advice to patients and prevent unnecessary testing. Once acknowledged, the history of future patients is often striking and indicative, with the onset of headaches suddenly and unexpectedly, gradually becoming persistent and unrelenting. Headaches often start during a viral infection and are more prevalent in females. Patients frequently have a clear recollection of the day their headache started.

After conducting thorough investigations on numerous patients, no definitive cause has been identified for the headache. As a result, the headache is now categorized as a primary headache disorder. Various treatment protocols have been published, but it is commonly observed that the headache pattern is quite resistant to treatment. [69,70]

### **Recent studies:**

**Parviz Bahrami et al (2012)** [71] studied Prevalence and Characteristics of Headache in Khoramabad, Iran. We evaluated headache prevalence and characteristics and some probable associated factors in patients referring to neurology specialist clinics. The total prevalence of primary headaches was 78.2%, with migraine (with and without aura) being the most prevalent type with a prevalence of 41.6% followed by tension type headache found in 31.6% of the study population. Primary headaches were significantly more common in women and younger age groups. Factors found associated with a significantly higher prevalence of primary headaches were lower economic level, higher educational level, occupation, OCP use and NSAIDs overuse. Secondary headaches,

with a total prevalence of 20.1%, significantly increased in older age groups and higher economic levels and were significantly less prevalent in higher educational levels.

**Gururaj G (2014) et al.** <sup>[72]</sup> investigated to find out the prevalence of headache disorders in Karnataka State and establish important sociodemographic associations. Using a door-to-door survey technique, amongst 2997 households, 2329 individuals were interviewed with a validated structured questionnaire by randomly sampling one adult member (aged 18-65 years) from eligible households in urban (n = 1226) and rural (n = 1103) areas of Bangalore, during the period April 2009 and January 2010. The 1-year prevalence of headache was 63.9% (62.0% when adjusted for age, gender and habitation) and 1-day prevalence (headache on the day prior to the survey) was 5.9%. Prevalence was higher in the age groups of 18-45 years, among females (OR = 2.3; 95% confidence interval: 1.9-2.7) and those in rural areas. Prevalence was higher in rural (71.2 [68.4-73.8]) than in urban areas (57.3 [54.5-60.1]) even after adjusting for gender. The proportion of days lost to headache from paid work was 1.1%, while overall productivity loss (from both paid and household work) was 2.8%. Headache disorders are a major health problem in India with significant burden. It requires systematic efforts to organize effective services to be able to reach a large number of people in urban and rural India. Education of physicians and other health-care workers, and the public should be a pillar of such efforts.

**Rao (2015) et al.** <sup>[73]</sup> estimated headache disorder loads to guide health policy. Biologically unrelated people (18-65 years) were randomly recruited from urban and rural Bangalore and questioned by professional researchers in a door-to-door survey. Multiple burden factors were assessed in the validated structured questionnaire. Out of 2,329 individuals (non-participation rate 7.4%), 1,488 (63.9%) (621 male, 867 female) experienced headaches in the previous year. On average, migraine occur on 28 days

per year, although in 38% of instances (9.6% of adults), they occur on  $\geq 3$  days per month ( $\geq 10\%$  of days). All headaches caused at  $\geq 15$  days/month (prevalence 3.0%) occurred on an average of 245 days/year. These were intense, as was migraine. Headache participants lost 4.3 % of productive time, whereas migraine participants lost 5.8 % (1.5 % of adults). 40% of this was lost paid worktime, likely reducing GDP. We evaluated migraine-related population-level impairment using GBD 2010's ictal state disability weight (0.433). Migraine caused 1.8 percent impairment per individual, lowering adult functional capacity by 0.46 percent. Fewer than 25% of headache sufferers sought medical treatment in the last year. Actual headache care costs were highest for patients with  $\geq 15$  days/month headaches, perhaps due to medication-overuse, but otherwise not high. Higher willingness to pay for effective headache therapy indicated unhappiness with present therapies. Common headache problems, notably migraine, in Karnataka State, southern India, cause enormous loads. Limited health care doesn't help. Structured headache services based on primary care are most efficient, effective, cheap, and fair. They may be cost-effective for India's health-care infrastructure. Awareness and political will are needed for this solution.

**Girish B Kulkarni (2015) et al.** <sup>[74]</sup> studied Headache disorders and public ill- health in India: prevalence estimates in Karnataka State. Aim was to estimate the prevalence of each of the headache disorders of public-health importance, and examine their sociodemographic associations, in urban and rural populations of Karnataka, south India. There is a very high 1-year prevalence of migraine in south India (the mean global prevalence is estimated at 14.7 %). Explanations probably lie in cultural, lifestyle and/or environmental factors, although the observed associations with female gender and rural dwelling are usual. Levels of TTH, pMOH and other headache on  $\geq 15$  days/month are similar to global averages, while the very strong association of pMOH with female gender

requires explanation. Until another study is conducted in the north of the country, these are the best data available for health policy in a population of over 1.2 billion people.

**Andreas Straube et al (2019) et al.** <sup>[75]</sup> studied Primary headaches during lifespan. Primary headaches are one of the most prevalent neurological disorders and can occur during a wide range of lifespan. Primary headaches, especially migraine, are cyclic disorders with a complex sequence of symptoms within every headache attack. There is no systematic review of whether these symptoms change during lifespan. Indeed, the clinical presentation of migraine shows an age-dependent change with a significantly shorter duration of the attacks and occurrence of different paroxysmal symptoms, such as vomiting, abdominal pain or vertigo, in childhood and, in contrast, largely an absence of autonomic signs and a more often bilateral headache in the elderly. The age-dependent differences in the clinical presentation are less distinct in cluster headache and, especially, in tension-type headache. The differences in the clinical presentation are in agreement with the idea that the connectivity of hypothalamic areas with different brainstem areas, especially the central parasympathetic areas, is important for the clinical manifestation of migraine, as well as the change during lifespan.

**Ajay S (2021) et al.** <sup>[76]</sup> carried out the study to estimate the prevalence of primary headache disorders (PHDs) and their burden in the rural community. A door to door survey was done in seven rural villages under Mugalur sub centre area, Sarjapura Primary Health Centre and Anekal taluk, Bangalore district, Karnataka State, south India, for finding the prevalence and burden of PHDs. During the study period of three months, a total of 1255 people were screened in the seven villages. 13.1% (165/1255) of people suffered from PHDs. The population prevalence of migraine without aura was 8.84% (111/1255), tension type headache was 2.86% (36/1255) and chronic migraine was 1.43% (18/1255). The mean number of headache days for all the PHDs was 4.26 ( $\pm 1.64$ )

days. 66.1% of persons with headache reported minimal or infrequent impact of headache. Among various demographic variables, headache was significantly associated with the female gender and marital status. It was concluded from the study that PHDs are prevalent in the rural communities of developing countries and need urgent attention of primary care physicians, community health departments, governmental agencies and policy makers.

**Sameera Shuaibi et al (2021) et al.** [77] studied Primary Headache Disorder among School Students in Kuwait. To examine the prevalence of primary headache disorders among primary and middle school students in Kuwait. Of 1,485 questionnaires that were distributed, 1,089 students completed the questionnaire with a respondent rate of 73.4%. The study population consisted of 420 boys (38.56%) and 669 girls (61.43%) students with a mean age of  $11.5 \pm 2.11$  years. The 1-year prevalence of primary headache disorders was 42.78%, with more middle schoolers reporting headaches than primary schoolers (50.37 vs. 30.48%;  $p < 0.02$ ). The mean age of students with primary headaches was  $11.98 \pm 2.03$  years in both genders. When stratified according to diagnostic criteria, migraine headaches were the most frequently reported (20.75%), followed by tension type headaches (18.8%), chronic headaches (2.75%), and probable medication-overuse headaches (0.46%). Primary headaches were significantly higher in girls compared to boys among middle schoolers (66.46 vs. 38.49%;  $p < 0.001$ ); however, no significant difference between genders was noted among primary school students (33.12 vs. 22.33%;  $p < 0.118$ ). Primary headaches are remarkably common in Kuwaiti school students, with migraine headaches being the most frequently reported type. Age and female gender may play a role in the development of primary headaches. These findings necessitate the direction of health services and research efforts toward this age group and warrant the need for further epidemiological studies.

**Sastry (2022) et al.** <sup>[78]</sup> conducted the study to investigate the clinical profile, disease burden, quality of life, and treatment patterns of various headache subtypes. In this prospective observational study, 815 patients presenting with chief complaints of headache between January 2020 to September 2021 were registered. After a detailed history, clinical examination, and subtyping, they were assessed at baseline with well-validated scales for severity (Visual Analogue Scale-VAS), disability burden (Migraine Disability Assessment- MIDAS), Humanistic burden (Headache Impact Test-HIT-6), and quality of life (World health organization-quality of life-WHO-QoL-8) scores. After initiating adequate management, parameters were reassessed at 3 and 6 months. 549 (67.7%) patients had migraine (395-episodic migraine, 144-chronic migraine); 266 (32.2%) patients had tension-type headache (TTH). Loss of sleep, prolonged working hours, and stress were common triggers. Disease burden, severity, and poor life quality was quite high in migraine patients (76.5% with moderate to severe disability, 61.7% with severe headache at onset, and 72% with poor life quality). All parameters had statistically significant improvement with preventive medication and lifestyle changes. Study concluded that migraine was the most common primary headache followed by TTH. Migraine patients had more severity, disease burdens, and inferior quality of life at onset compared to other headaches. With early and proper diagnosis as well as preventive treatment (including lifestyle modifications), all parameters could be reversed positively in a brief time.

**Sharma S K (2023) et al.** <sup>[79]</sup> carried out the study to investigate the epidemiology of primary headaches amongst undergraduate medical students by determining the prevalence of primary headaches and their associated psychosocial factors. This was a cross-sectional study which was conducted at a medical college in the Vidarbha region of India from January 2023 to February 2023 amongst 471 medical students. Diagnosis



of tension-type headache (TTH) was made according to the International Classification of Headache Disorders (ICHD-3) criteria. Prevalence of headache was 80% and was higher in females (87%) than in males (71%). TTH is the most common type with a prevalence of 76% in females followed by 64% in males. Psychosocial factors associated with presence of headache in study subjects were disappointment in relation to academic performance (OR 3.85, CI 1.68-2.71), poor socio-economic status (OR 2.69, CI 1.58-4.57), work overload (OR 0.41, CI 0.24-0.68), irritability (OR 0.33, CI 0.19-0.57) and frequent conflicts (OR 1.45, CI 0.78-2.70). Stress (OR 0.27, CI 0.11-0.71) and anxiety (OR 3.45, CI 1.31-9.08) were associated with headaches only in females and depression (OR 0.50, CI 0.25-1.01) was found to be associated with headaches only in males. It was concluded from the study that psychosocial factors from the personal sphere like stress, overwork, and anxiety were highly prevalent amongst students and these factors need to be addressed meticulously to mitigate the problem of primary headache disorders amongst medical undergraduates.

## MATERIALS & METHOD

### Study/ Research Design:

- ) Observational cross-sectional study.

### Sample Selection:

#### I. Inclusion Criterion

- ) Adult patients of age 18 years and above.
- ) Patients give consent for study.

#### II. Exclusion Criterion

- ) Patients younger than 18 years of age.
- ) Diabetes mellitus
- ) Hypertension (blood pressure >140/90 mmHg),
- ) Hyperlipidemia,
- ) Acute or chronic kidney disease
- ) Pregnancy
- ) Epilepsy
- ) Trauma

### Sampling including Sample Size Calculation:

$$n = \frac{Z^2 p(1-p)}{D^2}$$

n= Required sample size

Z= Z score(the number of standard deviations from the mean, corresponding to the desired confidence level)

**p= estimated prevalence (as a proportion, not a percentage)**

**d= margin of error (as a proportion, not a percentage)**

According to WHO, the prevalence of headache disorders is 40%.

Considering confidence interval of 95% which corresponds to a Z score of 1.96, prevalence of 40% (or 0.40), and a margin of error of 5% (or 0.05), **the calculation would be 369.**

**Study Method:**

**Study design:** Observational Cross-sectional study.

**Study location:** Department of Medicine, Maharani Laxmi Bai Medical College, Jhansi, Uttar Pradesh

**Study duration:** May 2023 to July 2024 (14 months)

**Ethical considerations:**

The study was approved by the M.L.B. Medical College Institutional Review Board \_\_\_\_\_ . Informed consent was obtained from each of the patient fulfilling the inclusion criteria prior to their enrolment in the study.

**Pilot study:**

History and complete neurological examination

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L |

|

Patients satisfying the inclusion criteria

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L |

|

Detailed history and examination

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L |

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Statistical analysis

|

L |

|

Informed consent

|

L |

|

Statistical analysis

|

L |

|

Result compilation

## **Validity and Reliability:**

### ***Validity***

1. **Construct Validity:** Ensure that the questionnaires used assess headache characteristics. This can include Migraine Disability Assessment (MIDAS) or the Patient Health Questionnaire (PHQ). It also includes clinical assessment to confirm the type and nature of headaches.
2. **Internal Validity:** Control for confounding variables that might affect the relationship between primary headache and prevalence. Use validated tools like MIDAS, randomization and use of shorter recall period to reduce recall bias.
3. **External Validity:** Ensure the study population is representative of the diverse, representative sample from various sections of society. Using MIDAS questionnaire, considering different healthcare contexts.
4. **Content Validity:** This is ensured by using validated MIDAS, PHQ and GAD scales, thoroughly covering headache impact, distress and anxiety, alongside comprehensive demographic, trigger and symptom factors.
5. **Criterion Validity:** This is ensured by correlating MIDAS, PHQ, and GAD scores with clinical diagnoses and established standards of headache impact, psychological distress and anxiety, validating the measures against these benchmarks.

### ***Reliability***

1. **Instrument Reliability:** Ensured by using validated MIDAS, PHQ, and GAD scales with established internal consistency and test-retest reliability, alongwith standardized data collection methods and consistent measurement protocols.

2. **Inter-Rater Reliability:** Ensured by training raters to consistently administer the MIDAS, PHQ, and GAD scales, standardizing assessment protocols, and measuring agreement between raters using statistical correlation methods.
3. **Test-Retest Reliability:** Ensured by administering the MIDAS, PHQ, and GAD scales to the same participants at different times and assessing consistency of responses to verify stability over time.
4. **Internal Consistency:** If using questionnaires or multi-item scales (e.g., to assess risk factors or symptoms), ensure that the items are consistent with each other. This can be tested using statistical methods like Cronbach's alpha.

### ***Enhancing Validity and Reliability***

1. **Standardize Protocols:** Use standardized protocols like uniform administration of MIDAS, PHQ, and GAD scales, consistent instructions for participants, and uniform procedures for collecting demographic, trigger, and symptom data to ensure reliable and valid results.
2. **Pilot Testing:** Conduct a pilot study to identify and correct potential issues in the study design, data collection methods, and instruments.
3. **Training and Calibration:** Train staff thoroughly and regularly calibrate equipment to ensure consistent and accurate measurements.
4. **Blinding:** Ensure data collectors and analysts are unaware of the study hypotheses and participant group assignments, to prevent bias in administering MIDAS, PHQ, GAD scales and other measures.

**Data collection procedure:**

Data collection involved recruiting participants meeting inclusion criteria and obtaining informed consent. The data was collected in Neurology and Medicine OPD. A relevant detailed questionnaire was prepared for demographic data, trigger factors, and symptoms, in a standardized setting. Participants were administered the MIDAS, PHQ, and GAD scales. A detailed physical neurological examination was done to rule out any secondary cause. Data was entered accurately, and regular checks were carried out to avoid any discrepancy.

**Plan for Data Analysis:**

The information collected regarding all the selected cases will be recorded in a Master chart in Microsoft Excel spread sheet. Data analysis will be done with the help of a computer using SPSS software. Using this software, range, frequencies, percentage, mean, standard deviation and p value will be calculated. Chi-square, Kruskal-Wallis Test, Fisher's Exact Test will be used to test the significance of difference between various variables. A 'p' value less than 0.05 will be taken as significant.

## RESULTS

**Table 1: Socio-Demographic Details of all patients of primary headache**

Socio-Demographic Details	Mean $\pm$ SD    Median (IQR)    Min-Max OR N (%)
<b>Age (Years)</b>	32.10 $\pm$ 9.70    30.00 (25.00-37.00)    18.00 - 70.00
<b>Age</b>	
18-30 Years	192 (50.5%)
31-40 Years	121 (31.8%)
41-50 Years	48 (12.6%)
51-60 Years	15 (3.9%)
61-70 Years	4 (1.1%)
<b>Gender</b>	
Male	123 (32.4%)
Female	257 (67.6%)
<b>Residence</b>	
Rural	128 (33.7%)
Urban	252 (66.3%)
<b>Marital Status</b>	
Unmarried	151 (39.7%)
Married	229 (60.3%)
<b>Family Structure</b>	
Joint	221 (58.2%)
Nuclear	159 (41.8%)
<b>Socioeconomic</b>	
Upper Class	24 (6.3%)
Upper Middle Class	95 (25.0%)
Middle Class	180 (47.4%)
Lower Middle Class	75 (19.7%)
Lower Class	6 (1.6%)
<b>Occupation</b>	
Student	137 (36.1%)
Housewife	127 (33.4%)
Farmer	43 (11.3%)
Shopkeeper	41 (10.8%)
Labourer	6 (1.6%)
Lawyer	8 (2.1%)
Teacher	6 (1.6%)
Sales Person	2 (0.5%)
Others	10 (2.6%)



**Table 2: Sodio-Demographic Details of Migraine patients**

<b>Sodio-Demographic Details</b>	<b>Mean ± SD    Median (IQR)    Min-Max OR N (%)</b>
<b>Age (Years)</b>	30.59 ± 8.63    29.00 (24.00-35.00)    18.00 - 57.00
<b>Age</b>	
18-30 Years	87 (55.8%)
31-40 Years	49 (31.4%)
41-50 Years	17 (10.9%)
51-60 Years	3 (1.9%)
61-70 Years	0 (0.0%)
<b>Gender</b>	
Male	29 (18.6%)
Female	127 (81.4%)
<b>Residence</b>	
Rural	55 (35.3%)
Urban	101 (64.7%)
<b>Marital Status</b>	
Unmarried	73 (46.8%)
Married	83 (53.2%)
<b>Family Structure</b>	
Joint	90 (57.7%)
Nuclear	66 (42.3%)
<b>Socioeconomic</b>	
Upper Class	14 (9.0%)
Upper Middle Class	42 (26.9%)
Middle Class	71 (45.5%)
Lower Middle Class	27 (17.3%)
Lower Class	2 (1.3%)
<b>Occupation</b>	
Student	67 (42.9%)
Housewife	62 (39.7%)
Farmer	8 (5.1%)
Shopkeeper	12 (7.7%)
Laborer	2 (1.3%)
Lawyer	2 (1.3%)
Teacher	1 (0.6%)
Salesperson	1 (0.6%)
Others	1 (0.6%)

**Table 3: Socio-Demographic Details of Tension Type Headache patients**

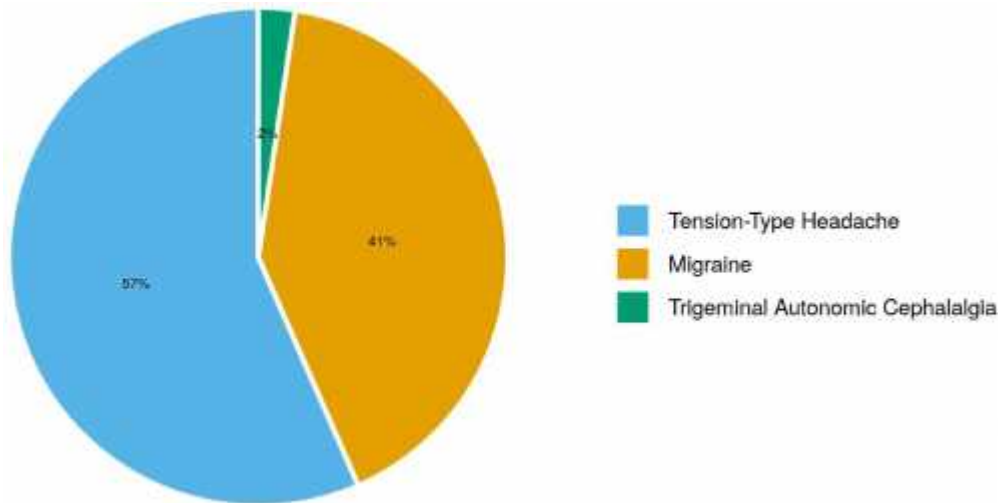
<b>Socio-Demographic Details</b>	<b>Mean ± SD    Median (IQR)    Min-Max OR N (%)</b>
<b>Age (Years)</b>	32.76 ± 10.01    31.00 (25.00-37.50)    18.00 - 70.00
<b>Age</b>	
18-30 Years	103 (47.9%)
31-40 Years	71 (33.0%)
41-50 Years	27 (12.6%)
51-60 Years	11 (5.1%)
61-70 Years	3 (1.4%)
<b>Gender</b>	
Male	85 (39.5%)
Female	130 (60.5%)
<b>Residence</b>	
Rural	70 (32.6%)
Urban	145 (67.4%)
<b>Marital Status</b>	
Unmarried	76 (35.3%)
Married	139 (64.7%)
<b>Family Structure</b>	
Joint	125 (58.1%)
Nuclear	90 (41.9%)
<b>Socioeconomic</b>	
Upper Class	10 (4.7%)
Upper Middle Class	51 (23.7%)
Middle Class	103 (47.9%)
Lower Middle Class	47 (21.9%)
Lower Class	4 (1.9%)
<b>Occupation</b>	
Student	69 (32.1%)
Housewife	65 (30.2%)
Farmer	33 (15.3%)
Shopkeeper	26 (12.1%)
Laborer	4 (1.9%)
Lawyer	4 (1.9%)
Teacher	5 (2.3%)
Salesperson	1 (0.5%)
Others	8 (3.7%)

**Table 4: Distribution of the Participants in Terms of 'Diagnosis'**

Diagnosis	Frequency	Percentage	95% CI
Tension-Type Headache	215	56.6%	51.4% - 61.6%
Migraine	156	41.1%	36.1% - 46.2%
Trigeminal Autonomic Cephalalgia	9	2.4%	1.2% - 4.6%

This table outlines the distribution of participants based on their headache diagnosis. The majority of participants were diagnosed with Tension-Type Headache, representing 56.6% (215 participants) of the total, with a confidence interval of 51.4% to 61.6%. Migraine was the second most common diagnosis, accounting for 41.1% (156 participants) with a confidence interval of 36.1% to 46.2%. Trigeminal Autonomic Cephalalgia was rare, found in only 2.4% (9 participants) of the cases, with a confidence interval ranging from 1.2% to 4.6%.

**Figure 1: Distribution of the Participants in Terms of 'Diagnosis'**

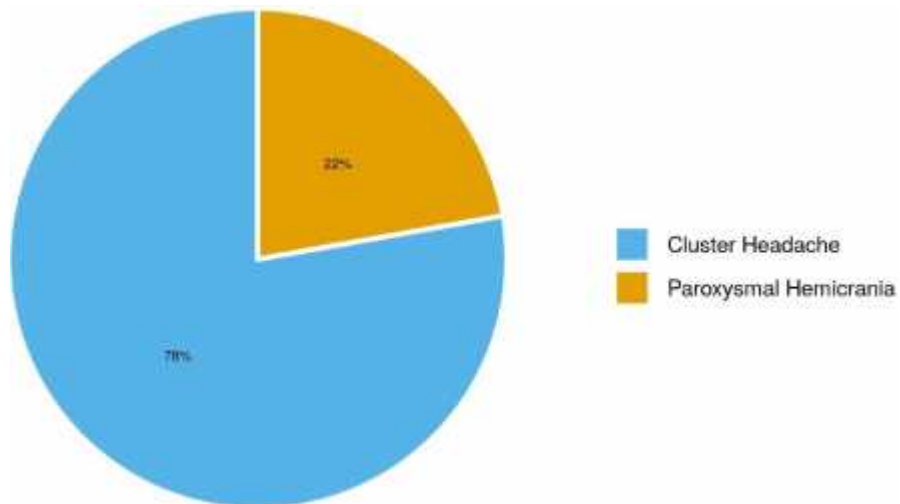


**Table 5: Distribution of the Participants in Terms of 'Type of Trigeminal Autonomic Cephalalgia'**

Type of Trigeminal Autonomic Cephalalgia	Frequency	Percentage	95% CI
Cluster Headache	7	77.8%	40.2% - 96.1%
Paroxysmal Hemicrania	2	22.2%	3.9% - 59.8%

This table focuses on the types of Trigeminal Autonomic Cephalalgia among the participants. Cluster Headache was the most prevalent subtype, seen in 77.8% (7 out of 9) of the participants diagnosed with Trigeminal Autonomic Cephalalgia, with a confidence interval of 40.2% to 96.1%. Paroxysmal Hemicrania was less common, comprising 22.2% (2 out of 9) of cases, with a confidence interval of 3.9% to 59.8%.

**Figure 2: Distribution of Type of Trigeminal Autonomic Cephalalgia**

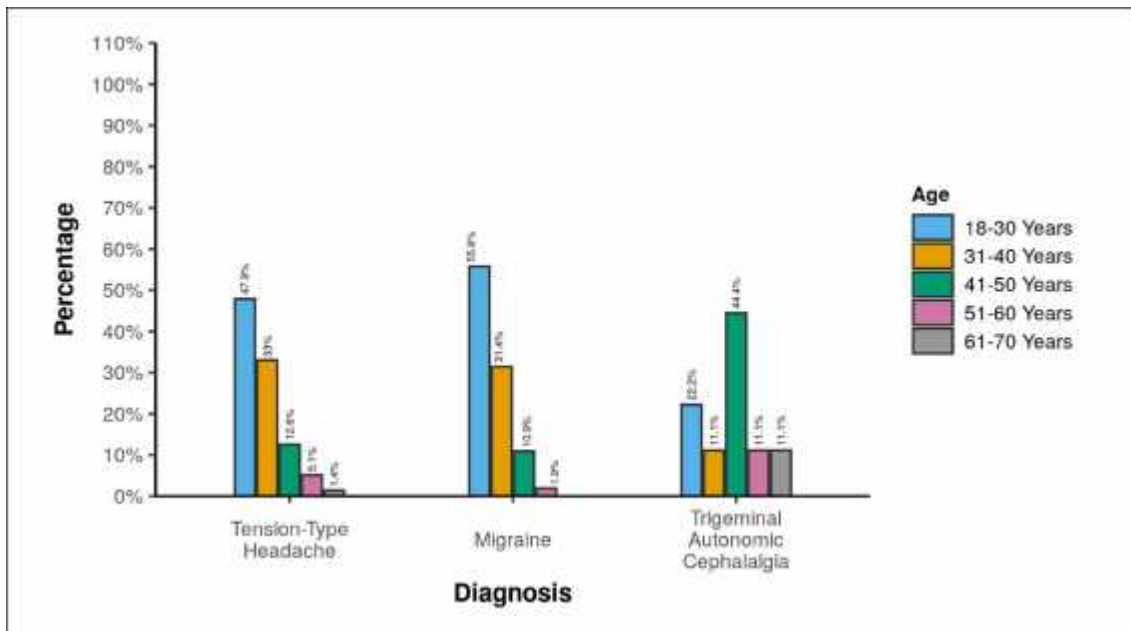


**Table 6: Association Between 'Diagnosis' and 'Age'**

Age	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
18-30 Years	103 (47.9%)	87 (55.8%)	2 (22.2%)	192 (50.5%)	25.535	0.001
31-40 Years	71 (33.0%)	49 (31.4%)	1 (11.1%)	121 (31.8%)		
41-50 Years	27 (12.6%)	17 (10.9%)	4 (44.4%)	48 (12.6%)		
51-60 Years	11 (5.1%)	3 (1.9%)	1 (11.1%)	15 (3.9%)		
61-70 Years	3 (1.4%)	0 (0.0%)	1 (11.1%)	4 (1.1%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

The age distribution among participants reveals a significant association with headache diagnosis ( $\chi^2 = 25.535$ ,  $p = 0.001$ ). Tension-Type Headache was most prevalent in the 18-30 age group, accounting for 47.9% (103 out of 215) of cases. Migraine was also common in this age group, with 55.8% (87 out of 156) of migraine cases. Trigeminal Autonomic Cephalalgia was most frequently seen in the 41-50 age group, representing 44.4% (4 out of 9) of cases.

**Figure 3: Association between Diagnosis and Age**

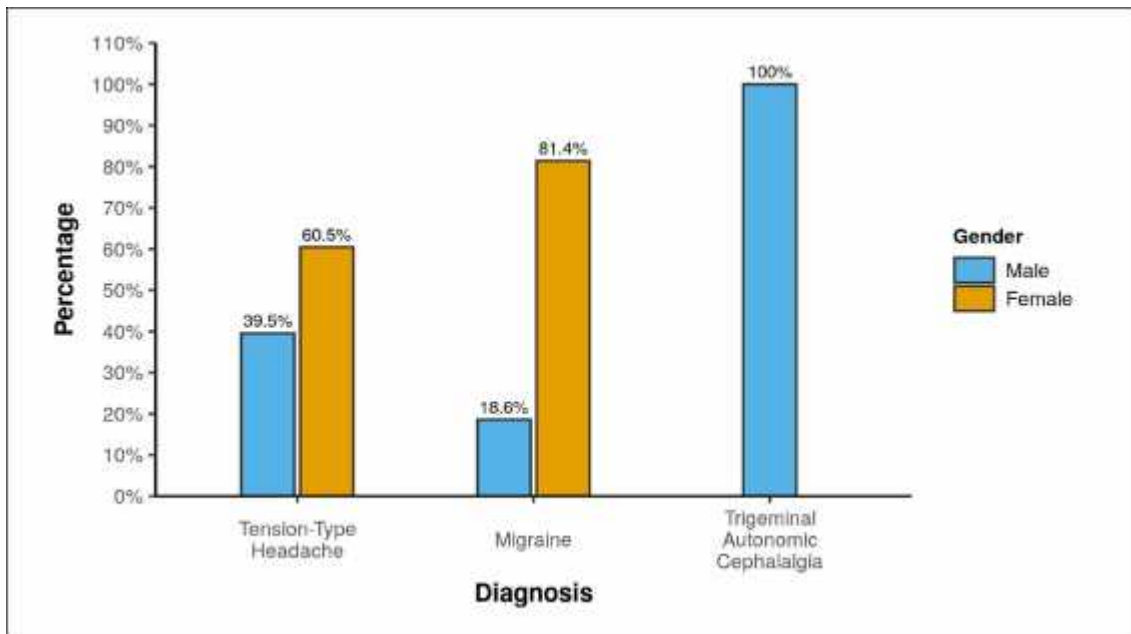


**Table 7: Association Between 'Diagnosis' and 'Gender'**

Gender	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalgia	Total	2	P Value
Male	85 (39.5%)	29 (18.6%)	9 (100.0%)	123 (32.4%)	37.378	<0.001
Female	130 (60.5%)	127 (81.4%)	0 (0.0%)	257 (67.6%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

Gender differences in headache diagnoses were highly significant ( $\chi^2 = 37.378$ ,  $p < 0.001$ ). Tension-Type Headache and Migraine were more common in females, with 60.5% (130 out of 215) and 81.4% (127 out of 156) of cases, respectively. In contrast, all cases of Trigeminal Autonomic Cephalgia occurred in males (100%, 9 out of 9).

**Figure 4: Association between Diagnosis and Gender**

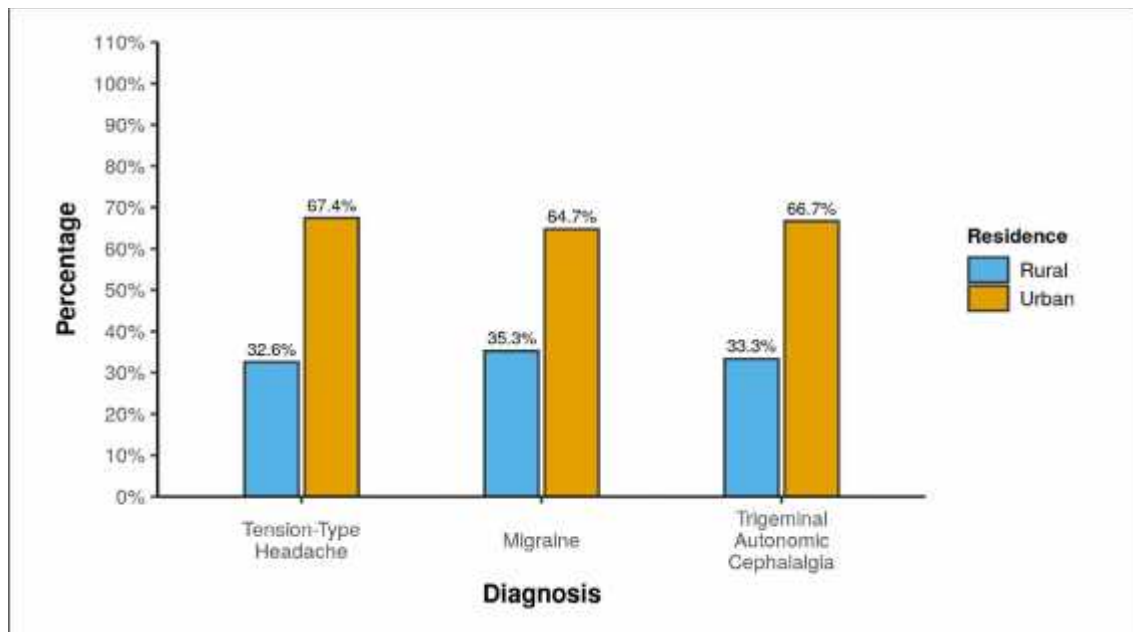


**Table 8: Association Between 'Diagnosis' and 'Residence'**

Residence	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Rural	70 (32.6%)	55 (35.3%)	3 (33.3%)	128 (33.7%)	0.295	0.863
Urban	145 (67.4%)	101 (64.7%)	6 (66.7%)	252 (66.3%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

There was no significant association between diagnosis and residence ( $\chi^2 = 0.295$ ,  $p = 0.863$ ). Both Tension-Type Headache and Migraine were slightly more common in urban areas, with 67.4% (145 out of 215) and 64.7% (101 out of 156) of cases, respectively. Trigeminal Autonomic Cephalalgia also had a slight urban predominance (66.7%, 6 out of 9).

**Figure 5: Association Between 'Diagnosis' and 'Residence'**

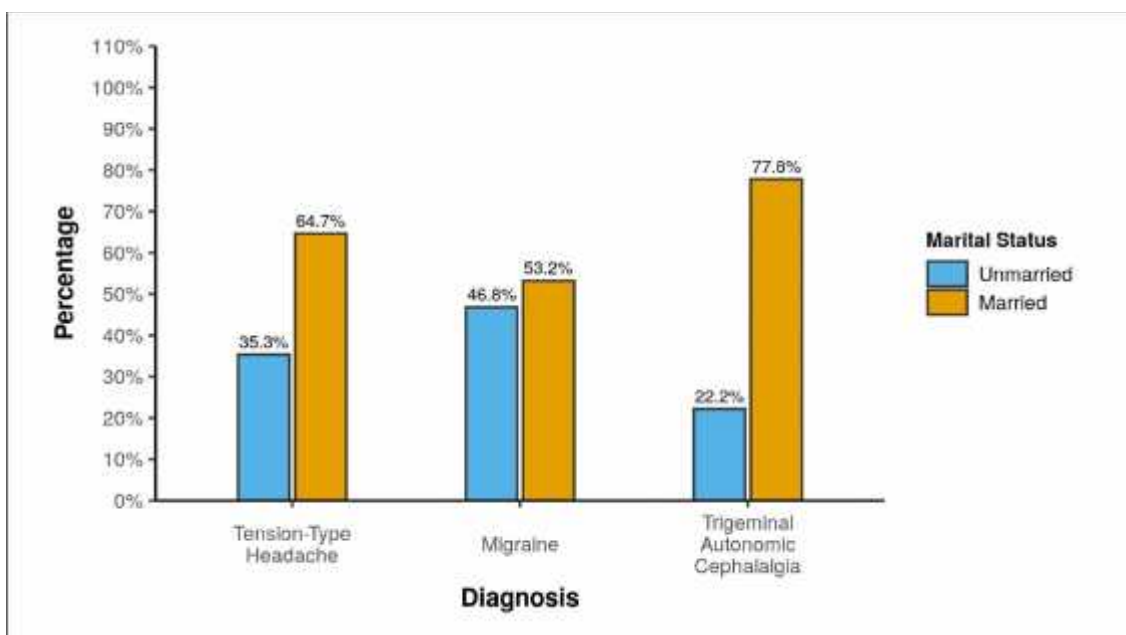


**Table 9: Association Between 'Diagnosis' and 'Marital Status'**

Marital Status	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Unmarried	76 (35.3%)	73 (46.8%)	2 (22.2%)	151 (39.7%)	6.127	0.047
Married	139 (64.7%)	83 (53.2%)	7 (77.8%)	229 (60.3%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

Marital status showed a significant association with headache diagnosis ( $\chi^2 = 6.127, p = 0.047$ ). Married participants were more likely to suffer from Tension-Type Headache (64.7%, 139 out of 215) and Trigeminal Autonomic Cephalalgia (77.8%, 7 out of 9). In contrast, unmarried participants had a higher prevalence of Migraine (46.8%, 73 out of 156).

**Figure 6: Association between Diagnosis and Marital Status**



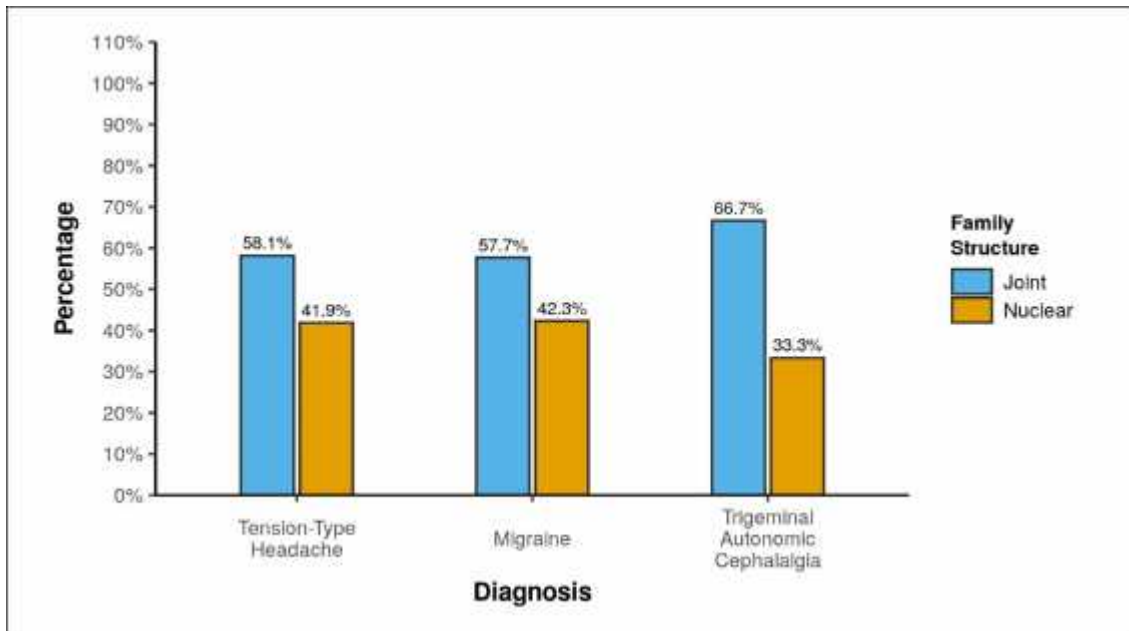


**Table 10: Association Between 'Diagnosis' and 'Family Structure'**

Family Structure	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Joint	125 (58.1%)	90 (57.7%)	6 (66.7%)	221 (58.2%)	0.282	0.869
Nuclear	90 (41.9%)	66 (42.3%)	3 (33.3%)	159 (41.8%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

The association between diagnosis and family structure was not significant ( $\chi^2 = 0.282$ ,  $p = 0.869$ ). Participants from joint families had a slightly higher prevalence of Tension-Type Headache (58.1%, 125 out of 215) and Trigeminal Autonomic Cephalalgia (66.7%, 6 out of 9), while Migraine was almost equally distributed between joint (57.7%, 90 out of 156) and nuclear families (42.3%, 66 out of 156).

**Figure 7: Association between Diagnosis and Family Structure**

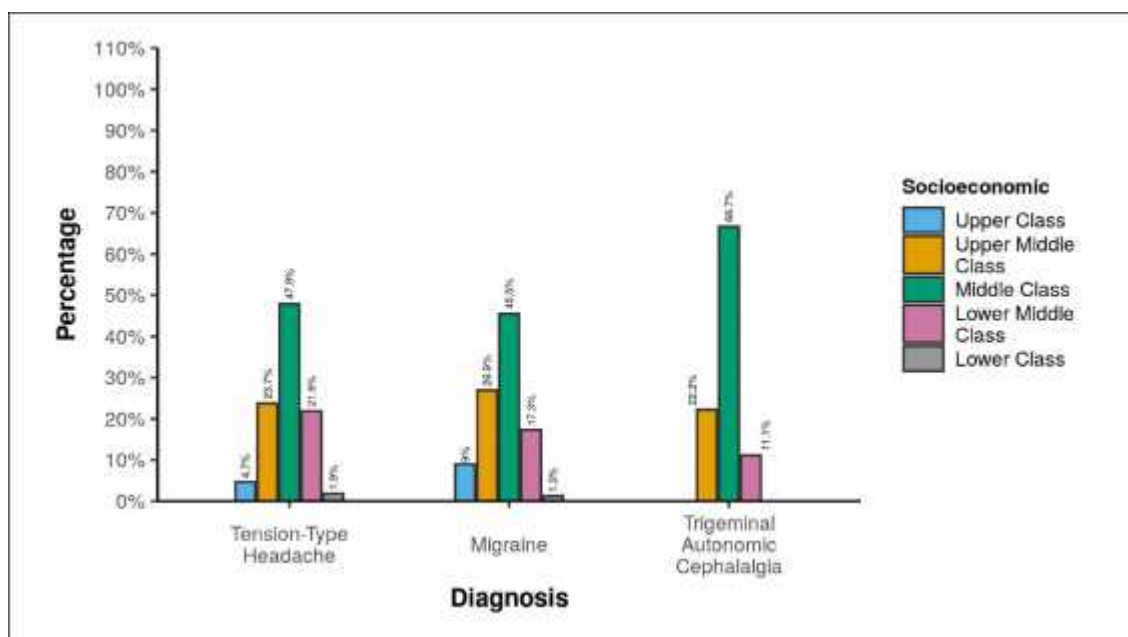


**Table 11: Association Between 'Diagnosis' and 'Socioeconomic'**

Socioeconomic	Diagnosis				Fisher's Exact Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Upper Class	10 (4.7%)	14 (9.0%)	0 (0.0%)	24 (6.3%)	6.125	0.682
Upper Middle Class	51 (23.7%)	42 (26.9%)	2 (22.2%)	95 (25.0%)		
Middle Class	103 (47.9%)	71 (45.5%)	6 (66.7%)	180 (47.4%)		
Lower Middle Class	47 (21.9%)	27 (17.3%)	1 (11.1%)	75 (19.7%)		
Lower Class	4 (1.9%)	2 (1.3%)	0 (0.0%)	6 (1.6%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

Socioeconomic status did not show a significant association with headache diagnosis (Fisher's Exact Test,  $\chi^2 = 6.125$ ,  $p = 0.682$ ). The middle class had the highest prevalence of Tension-Type Headache (47.9%, 103 out of 215) and Trigeminal Autonomic Cephalalgia (66.7%, 6 out of 9). Migraine was more common in the upper middle class (26.9%, 42 out of 156) and middle class (45.5%, 71 out of 156).

**Figure 8: Association between Diagnosis and Socioeconomic**

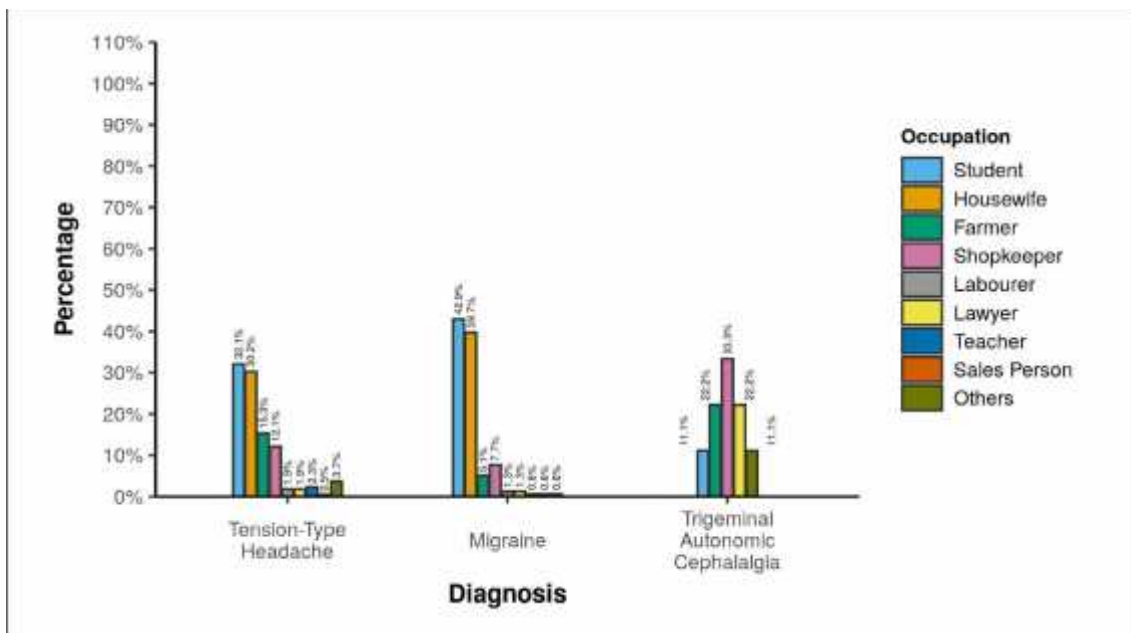


**Table 12: Association Between 'Diagnosis' and 'Occupation'**

Occupation	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Student	69 (32.1%)	67 (42.9%)	1 (11.1%)	137 (36.1%)	51.204	<0.001
Housewife	65 (30.2%)	62 (39.7%)	0 (0.0%)	127 (33.4%)		
Farmer	33 (15.3%)	8 (5.1%)	2 (22.2%)	43 (11.3%)		
Shopkeeper	26 (12.1%)	12 (7.7%)	3 (33.3%)	41 (10.8%)		
Laborer	4 (1.9%)	2 (1.3%)	0 (0.0%)	6 (1.6%)		
Lawyer	4 (1.9%)	2 (1.3%)	2 (22.2%)	8 (2.1%)		
Teacher	5 (2.3%)	1 (0.6%)	0 (0.0%)	6 (1.6%)		
Salesperson	1 (0.5%)	1 (0.6%)	0 (0.0%)	2 (0.5%)		
Others	8 (3.7%)	1 (0.6%)	1 (11.1%)	10 (2.6%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

There was a significant association between occupation and headache diagnosis ( $\chi^2 = 51.204$ ,  $p < 0.001$ ). Students were the most affected group, with Migraine (42.9%, 67 out of 156) and Tension-Type Headache (32.1%, 69 out of 215) being prevalent. Housewives also had a high incidence of Tension-Type Headache (30.2%, 65 out of 215) and Migraine (39.7%, 62 out of 156). Trigeminal Autonomic Cephalalgia was most common among shopkeepers (33.3%, 3 out of 9) and farmers (22.2%, 2 out of 9).

**Figure 9: Association between Diagnosis and Occupation**



**Table 13: Association between 'Diagnosis' and 'Duration of Illness (Years)'**

Duration of Illness (Years)	Diagnosis			Kruskal Wallis Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	2	p value
Mean (SD)	3.29 (2.57)	4.12 (2.79)	4.78 (2.59)	11.822	0.003
Median (IQR)	3 (2-5)	4 (2-5)	5 (2-6)		
Min - Max	0.2 - 25	0.25 - 15	1 - 8		

The duration of illness was significantly associated with the type of headache (Kruskal-Wallis Test,  $\chi^2 = 11.822$ ,  $p = 0.003$ ). Migraine had a mean duration of 4.12 years (SD = 2.79), followed by Trigeminal Autonomic Cephalalgia with 4.78 years (SD = 2.59), and Tension-Type Headache with 3.29 years (SD = 2.57). The median duration was longest for Trigeminal Autonomic Cephalalgia (5 years), indicating that this condition may persist longer than the others.

**Figure 10: Association Between Diagnosis and Duration of Illness (Years)**

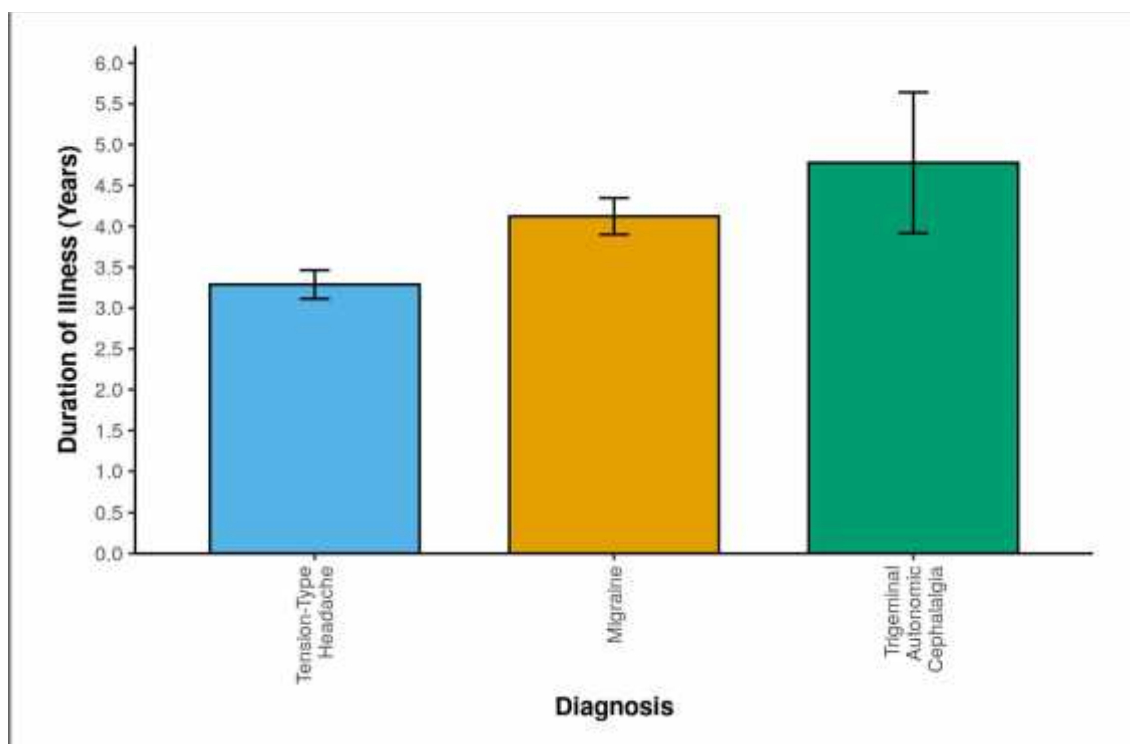
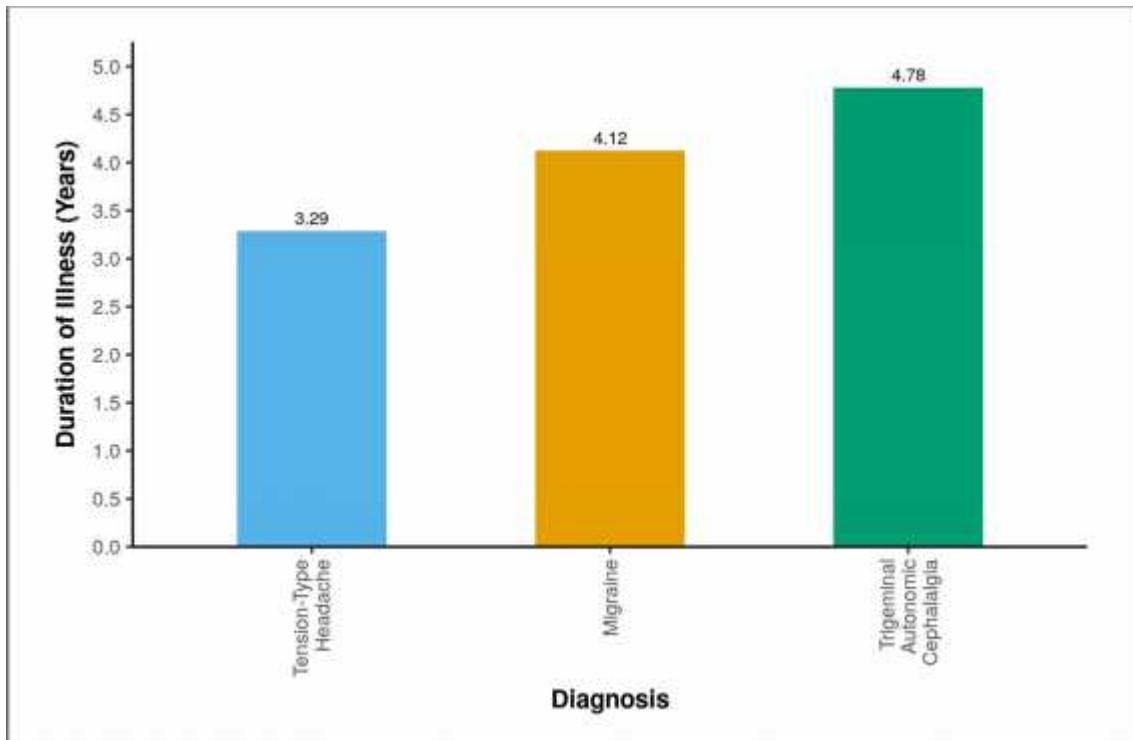


Figure 11: Association Between Diagnosis and Duration of Illness (Years)

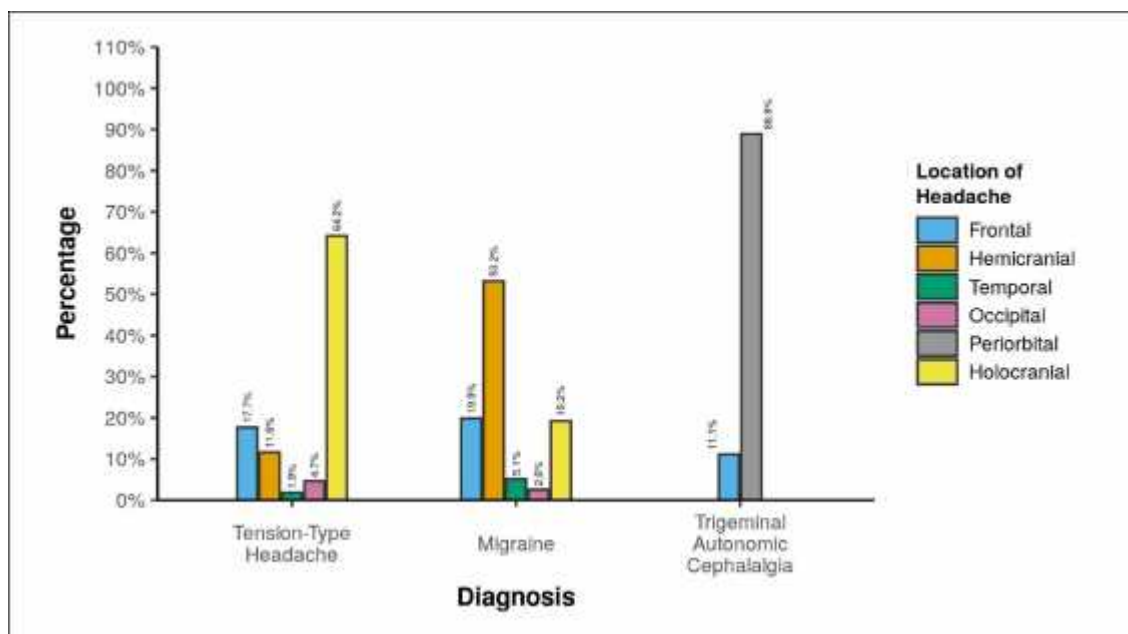


**Table 14: Association Between 'Diagnosis' and 'Location of Headache'**

Location of Headache	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Frontal	38 (17.7%)	31 (19.9%)	1 (11.1%)	70 (18.4%)	438.047	<0.001
Hemicranial	25 (11.6%)	83 (53.2%)	0 (0.0%)	108 (28.4%)		
Temporal	4 (1.9%)	8 (5.1%)	0 (0.0%)	12 (3.2%)		
Occipital	10 (4.7%)	4 (2.6%)	0 (0.0%)	14 (3.7%)		
Periorbital	0 (0.0%)	0 (0.0%)	8 (88.9%)	8 (2.1%)		
Holocranial	138 (64.2%)	30 (19.2%)	0 (0.0%)	168 (44.2%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

The location of the headache was strongly associated with diagnosis ( $\chi^2 = 438.047$ ,  $p < 0.001$ ). Tension-Type Headaches were predominantly holocranial (64.2%, 138 out of 215). Migraine were mostly hemicranial (53.2%, 83 out of 156), while Trigeminal Autonomic Cephalalgia was primarily periorbital (88.9%, 8 out of 9).

**Figure 12: Association between Diagnosis and Location of Headache**

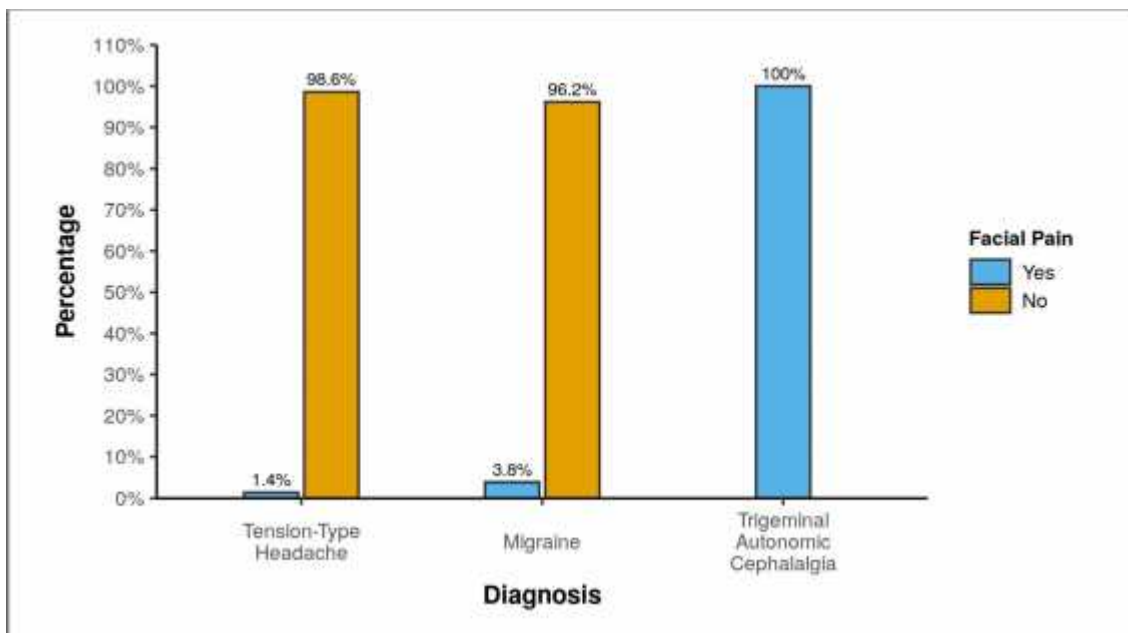


**Table 15: Association Between 'Diagnosis' and 'Facial Pain'**

Facial Pain	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalgia	Total	2	P Value
Yes	3 (1.4%)	6 (3.8%)	9 (100.0%)	18 (4.7%)	186.594	<0.001
No	212 (98.6%)	150 (96.2%)	0 (0.0%)	362 (95.3%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

Facial pain showed a significant association with diagnosis ( $\chi^2 = 186.594$ ,  $p < 0.001$ ). Trigeminal Autonomic Cephalgia was associated with facial pain in all cases (100%, 9 out of 9), while it was uncommon in Tension-Type Headache (1.4%, 3 out of 215) and Migraine (3.8%, 6 out of 156).

**Figure 13: Association between Diagnosis and Facial Pain**

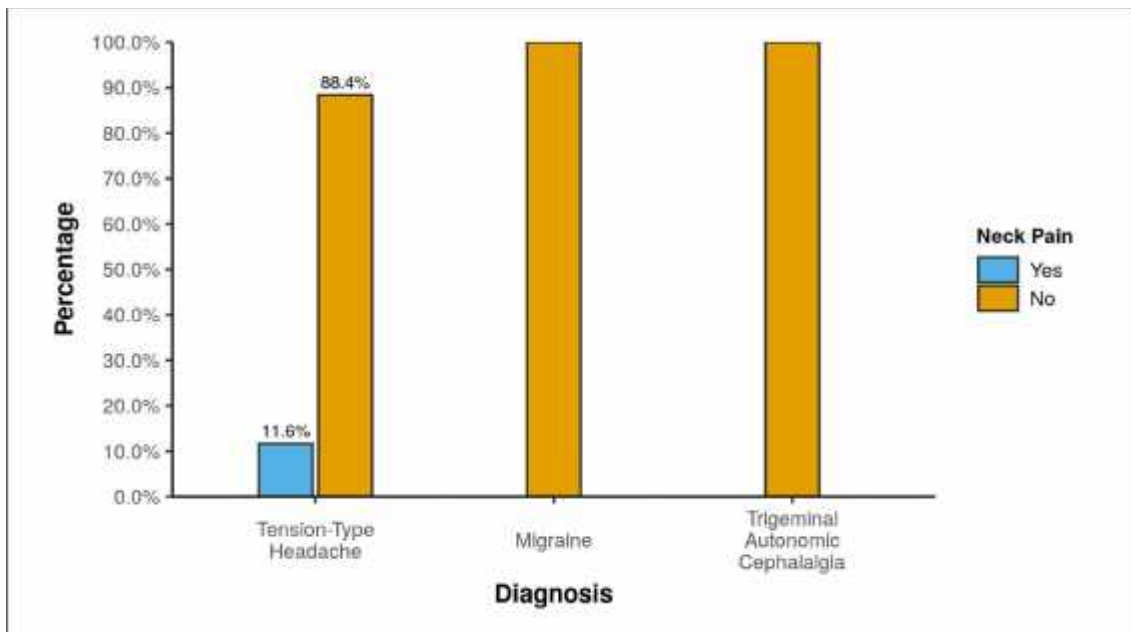


**Table 16: Association Between 'Diagnosis' and 'Neck Pain'**

Neck Pain	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Yes	25 (11.6%)	0 (0.0%)	0 (0.0%)	25 (6.6%)	20.537	<0.001
No	190 (88.4%)	156 (100.0%)	9 (100.0%)	355 (93.4%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

Neck pain showed a significant association with diagnosis ( $\chi^2 = 20.537$ ,  $p < 0.001$ ). Trigeminal Autonomic Cephalalgia and migraine were not associated with neck pain in all cases, while it was found in patients with Tension-Type Headache (11.6%, 25 out of 215).

**Figure 14: Association between Diagnosis and Neck Pain**



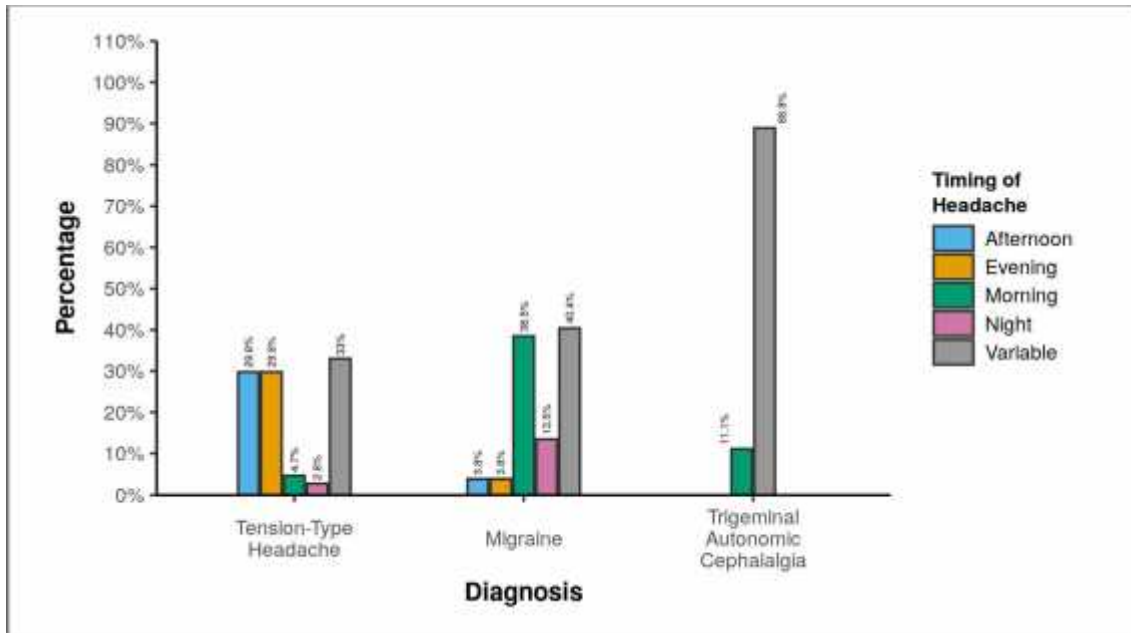


**Table 17: Association Between 'Diagnosis' and 'Timing of Headache'**

Timing of Headache	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Afternoon	64 (29.8%)	6 (3.8%)	0 (0.0%)	70 (18.4%)	147.943	<0.001
Evening	64 (29.8%)	6 (3.8%)	0 (0.0%)	70 (18.4%)		
Morning	10 (4.7%)	60 (38.5%)	1 (11.1%)	71 (18.7%)		
Night	6 (2.8%)	21 (13.5%)	0 (0.0%)	27 (7.1%)		
Variable	71 (33.0%)	63 (40.4%)	8 (88.9%)	142 (37.4%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

The timing of headaches varied significantly across diagnoses ( $\chi^2 = 147.943$ ,  $p < 0.001$ ). Tension-Type Headaches were most reported in the afternoon and evening (both 29.8%, 64 out of 215). Migraine were frequently experienced in the morning (38.5%, 60 out of 156), while Trigeminal Autonomic Cephalalgia had a high variability in timing (88.9%, 8 out of 9).

**Figure 15: Association between Diagnosis and Timing of Headache**

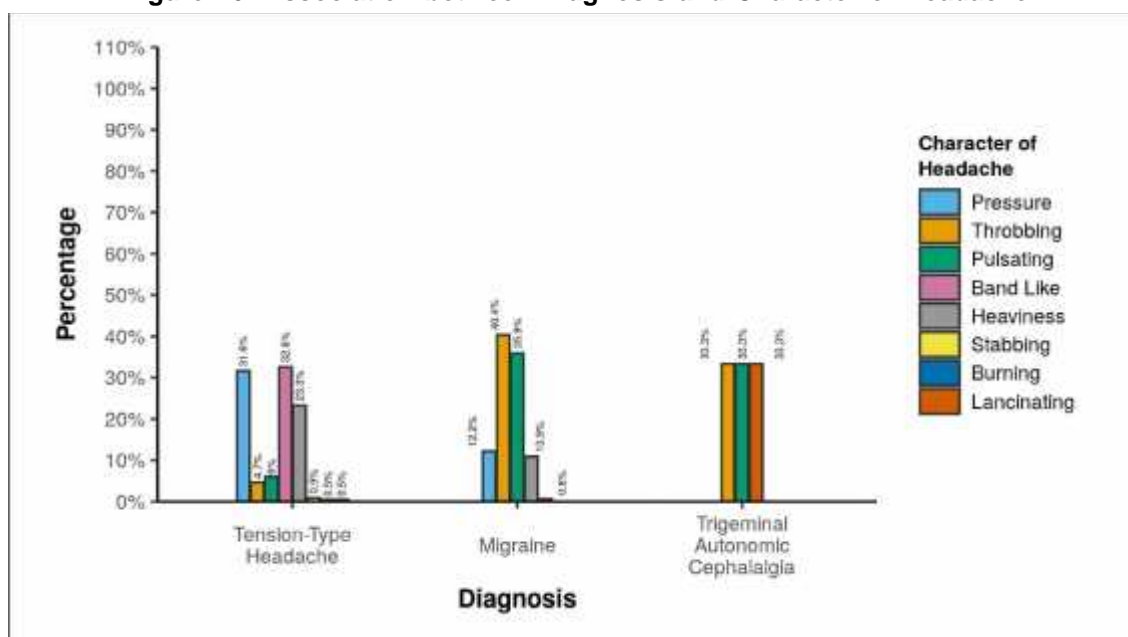


**Table 18: Association Between 'Diagnosis' and 'Character of Headache'**

Character of Headache	Diagnosis				Chi-Squared Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Pressure	68 (31.6%)	19 (12.2%)	0 (0.0%)	87 (22.9%)	274.662	<0.001
Throbbing	10 (4.7%)	63 (40.4%)	3 (33.3%)	76 (20.0%)		
Pulsating	13 (6.0%)	56 (35.9%)	3 (33.3%)	72 (18.9%)		
Band Like	70 (32.6%)	0 (0.0%)	0 (0.0%)	70 (18.4%)		
Heaviness	50 (23.3%)	17 (10.9%)	0 (0.0%)	67 (17.6%)		
Stabbing	2 (0.9%)	1 (0.6%)	0 (0.0%)	3 (0.8%)		
Burning	1 (0.5%)	0 (0.0%)	0 (0.0%)	1 (0.3%)		
Lancinating	1 (0.5%)	0 (0.0%)	3 (33.3%)	4 (1.1%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

The character of headaches also differed significantly by diagnosis ( $\chi^2 = 274.662, p < 0.001$ ). Tension-Type Headaches were mainly described as pressure (31.6%, 68 out of 215) or band-like (32.6%, 70 out of 215). Migraine were often throbbing (40.4%, 63 out of 156) or pulsating (35.9%, 56 out of 156), while Trigeminal Autonomic Cephalalgia was described as pulsating or lancinating (both 33.3%, 3 out of 9).

**Figure 16: Association between Diagnosis and Character of Headache**



**Table 19: Association between 'Diagnosis' and 'Duration of Headache (Hours)'**

Duration of Headache (Hours)	Diagnosis			Kruskal Wallis Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	2	p value
Mean (SD)	7.50 (6.26)	8.40 (5.94)	1.26 (1.80)	35.053	<0.001
Median (IQR)	6 (5-8)	8 (5-10)	0.5 (0.5-1)		
Min - Max	0.25 - 48	1 - 48	0.3 - 6		

The duration of headaches was significantly different across diagnoses (Kruskal-Wallis Test,  $\chi^2 = 35.053$ ,  $p < 0.001$ ). Migraine had a longer mean duration of 8.4 hours (SD = 5.94), compared to Tension-Type Headache (7.5 hours, SD = 6.26). Trigeminal Autonomic Cephalalgia had the shortest mean duration of 1.26 hours (SD = 1.80).

**Figure 17: Association Between Diagnosis and Duration of Headache (Hours)**

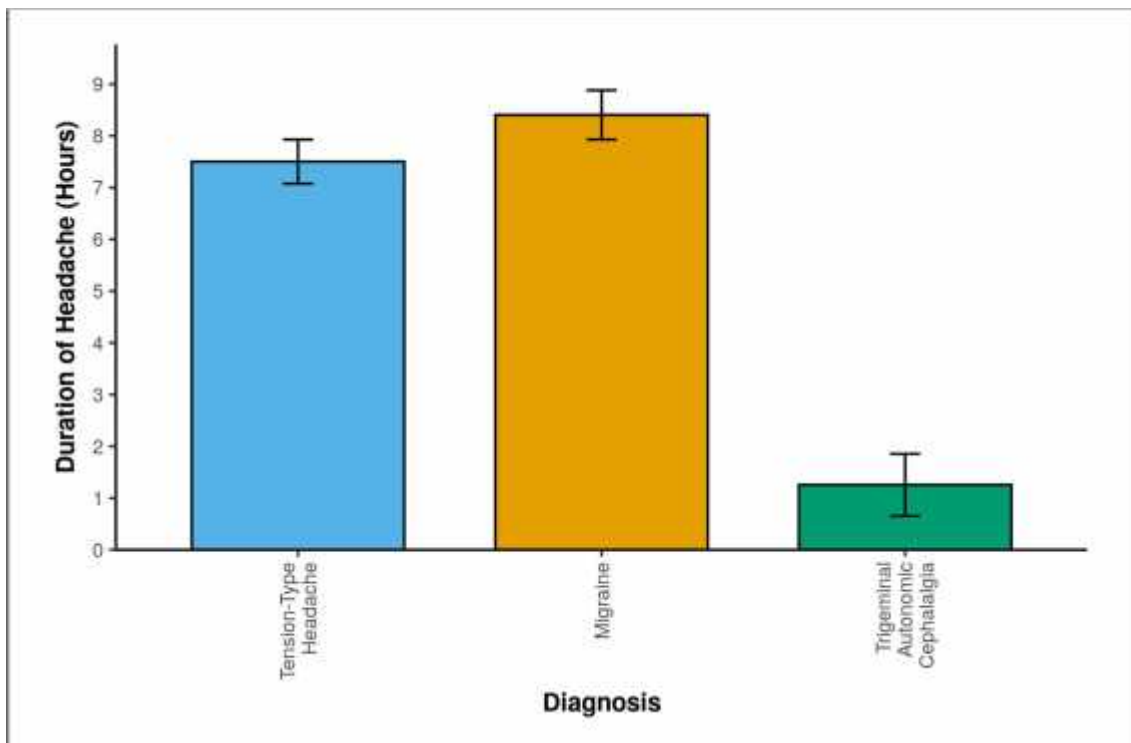
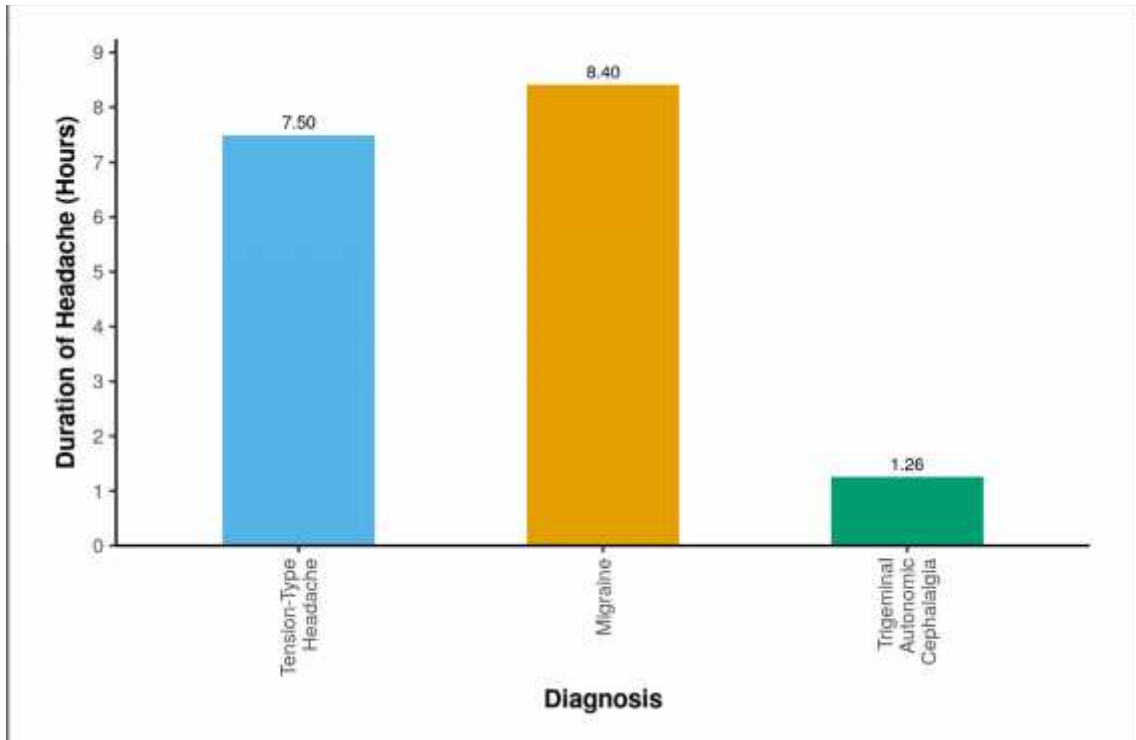


Figure 18: Association Between Diagnosis and Duration of Headache (Hours)

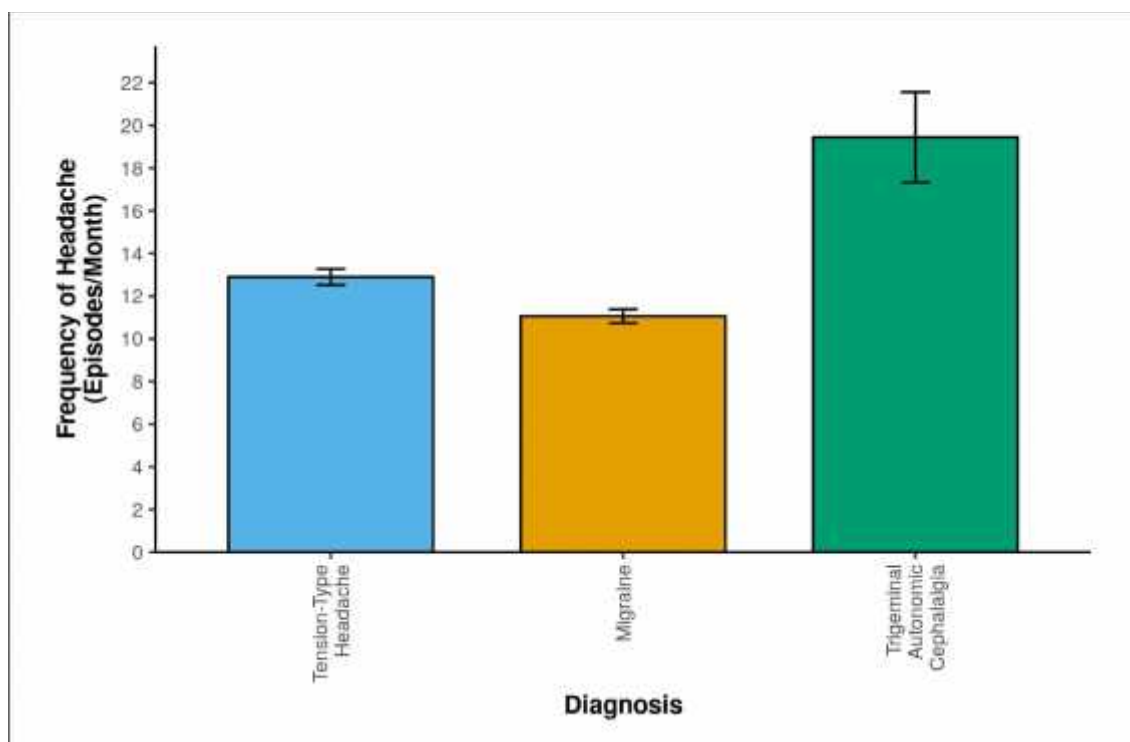


**Table 20: Association between 'Diagnosis' and 'Frequency of Headache (Episodes/Month)'**

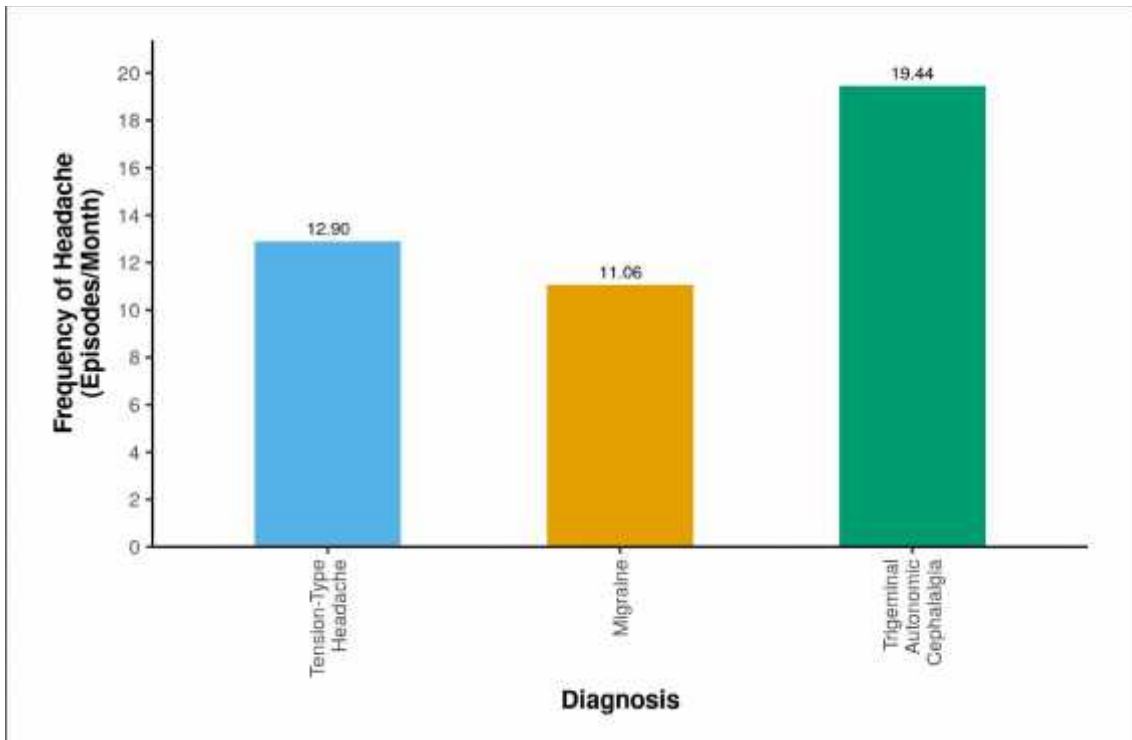
Frequency of Headache (Episodes/Month)	Diagnosis			Kruskal Wallis Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	2	p value
Mean (SD)	12.90 (5.55)	11.06 (4.01)	19.44 (6.35)	24.403	<0.001
Median (IQR)	12 (10-15)	10 (10-12)	20 (20-20)		
Min - Max	2 - 30	3 - 30	10 - 30		

The frequency of headaches per month showed significant variation by diagnosis (Kruskal-Wallis Test,  $\chi^2 = 24.403$ ,  $p < 0.001$ ). Trigeminal Autonomic Cephalalgia had the highest mean frequency of 19.44 episodes per month (SD = 6).

**Figure 19: Association Between Diagnosis and Frequency of Headache (Episodes/Month)**



**Figure 20: Association Between Diagnosis and Frequency of Headache (Episodes/Month)**



**Table 21: Association between triggers and diagnosis**

<b>Parameters</b>	<b>TTH</b>	<b>Migraine</b>	<b>TAC</b>	<b>p-value</b>
<b>Triggers: Stress (Yes)***</b>	210 (97.7%)	67 (42.9%)	4 (44.4%)	<0.001 <sup>2</sup>
<b>Triggers: Fasting/Missing a Meal (Yes)***</b>	5 (2.3%)	84 (53.8%)	2 (22.2%)	<0.001 <sup>2</sup>
<b>Triggers: Sleep Deprivation (Yes)***</b>	9 (4.2%)	71 (45.5%)	2 (22.2%)	<0.001 <sup>2</sup>
<b>Triggers: Auditory (Yes)***</b>	1 (0.5%)	77 (49.4%)	0 (0.0%)	<0.001 <sup>2</sup>
<b>Triggers: Fatigue (Yes)***</b>	5 (2.3%)	56 (35.9%)	2 (22.2%)	<0.001 <sup>2</sup>
<b>Triggers: Visual (Yes)***</b>	1 (0.5%)	62 (39.7%)	0 (0.0%)	<0.001 <sup>2</sup>
<b>Triggers: Weather (Yes)***</b>	0 (0.0%)	18 (11.5%)	2 (22.2%)	<0.001 <sup>2</sup>
<b>Triggers: Olfactory (Yes)***</b>	0 (0.0%)	8 (5.1%)	0 (0.0%)	0.003 <sup>3</sup>
<b>Triggers: Alcohol (Yes)***</b>	0 (0.0%)	0 (0.0%)	3 (33.3%)	<0.001 <sup>3</sup>
<b>Triggers: Coughing/Straining (Yes)</b>	0 (0.0%)	0 (0.0%)	0 (0.0%)	1.000 <sup>2</sup>
<b>Triggers: Exercise (Yes)</b>	0 (0.0%)	0 (0.0%)	0 (0.0%)	1.000 <sup>2</sup>
<b>Triggers: Sexual Activity (Yes)</b>	0 (0.0%)	0 (0.0%)	0 (0.0%)	1.000 <sup>2</sup>

Headache triggers were significantly associated with diagnosis. Stress was a near-universal trigger for Tension-Type Headache (97.7%, 210 out of 215), while Migraine was commonly triggered by factors such as fasting (53.8%, 84 out of 156) and sleep deprivation (45.5%, 71 out of 156). Trigeminal Autonomic Cephalalgia was less frequently triggered by these factors but was associated with alcohol consumption (33.3%, 3 out of 9).

**Table 22: Association between associated features and diagnosis**

<b>Parameter</b>	<b>TTH</b>	<b>Migraine</b>	<b>TAC</b>	<b>p-value</b>
<b>Associated Features: None (Yes)***</b>	187 (87.0%)	7 (4.5%)	4 (44.4%)	<0.001 <sup>3</sup>
<b>Associated Features: Nausea/Vomiting (Yes)***</b>	28 (13.0%)	130 (83.3%)	5 (55.6%)	<0.001 <sup>2</sup>
<b>Associated Features: Photophobia (Yes)***</b>	0 (0.0%)	101 (64.7%)	0 (0.0%)	<0.001 <sup>2</sup>
<b>Associated Features: Phonophobia (Yes)***</b>	0 (0.0%)	31 (19.9%)	0 (0.0%)	<0.001 <sup>2</sup>
<b>Associated Features: Vertigo/Dizziness (Yes)***</b>	0 (0.0%)	28 (17.9%)	0 (0.0%)	<0.001 <sup>2</sup>

Associated features such as nausea/vomiting, photophobia, and phonophobia were significantly more common in Migraine (83.3%, 130 out of 156; 64.7%, 101 out of 156; and 19.9%, 31 out of 156, respectively) compared to Tension-Type Headache, which had minimal associated features (13.0%, 28 out of 215 had nausea/vomiting). Trigeminal Autonomic Cephalalgia showed moderate associations with these features.



**Table 23: Association between Diagnosis and Autonomic features**

<b>Parameter</b>	<b>TTH</b>	<b>Migraine</b>	<b>TAC</b>	<b>p-value</b>
<b>Autonomic Symptoms: None (Yes)***</b>	215 (100.0%)	146 (93.6%)	0 (0.0%)	<0.001 <sup>2</sup>
<b>Autonomic Symptoms: Lacrimation (Yes)***</b>	0 (0.0%)	10 (6.4%)	8 (88.9%)	<0.001 <sup>2</sup>
<b>Autonomic Symptoms: Redness (Yes)***</b>	0 (0.0%)	2 (1.3%)	8 (88.9%)	<0.001 <sup>3</sup>
<b>Autonomic Symptoms: Ptosis (Yes)</b>	0 (0.0%)	0 (0.0%)	0 (0.0%)	1.000 <sup>2</sup>
<b>Autonomic Symptoms: Miosis (Yes)</b>	0 (0.0%)	0 (0.0%)	0 (0.0%)	1.000 <sup>2</sup>

Autonomic features were significantly associated with Trigeminal Autonomic Cephalalgia ( $\chi^2 < 0.001$ ). Lacrimation and redness were present in 88.9% (8 out of 9) of Trigeminal Autonomic Cephalalgia cases, whereas these symptoms were rare or absent in Tension-Type Headache and Migraine.

**Table 24: Association between 'Diagnosis' and 'Pain Severity Scale'**

Pain Severity Scale	Diagnosis			Kruskal Wallis Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	2	p value
Mean (SD)	6.01 (0.81)	6.31 (0.61)	6.67 (0.87)	17.836	<0.001
Median (IQR)	6 (6-6)	6 (6-7)	7 (6-7)		
Min - Max	3 - 9	5 - 8	5 - 8		

Pain severity differed significantly among diagnoses (Kruskal-Wallis Test,  $\chi^2 = 17.836$ ,  $p < 0.001$ ). Trigeminal Autonomic Cephalalgia had the highest mean pain severity score of 6.67 (SD = 0.87), followed by Migraine at 6.31 (SD = 0.61) and Tension-Type Headache at 6.01 (SD = 0.81).

**Figure 21: Association Between Diagnosis and Pain Severity Scale**

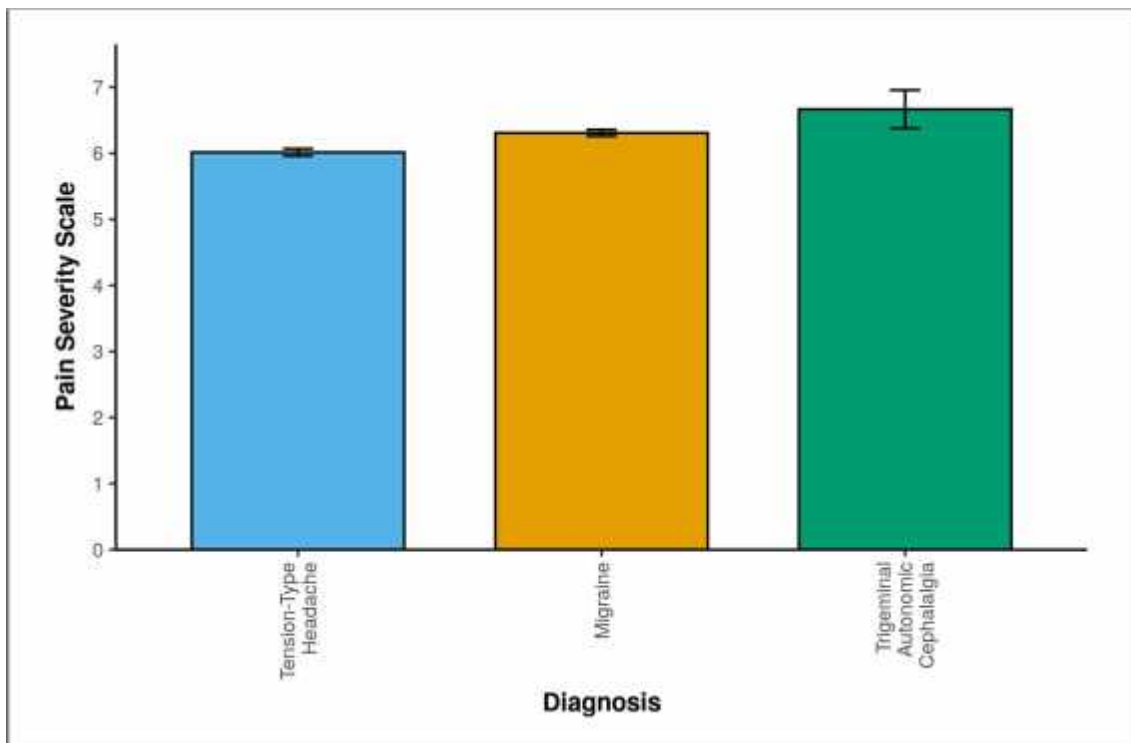
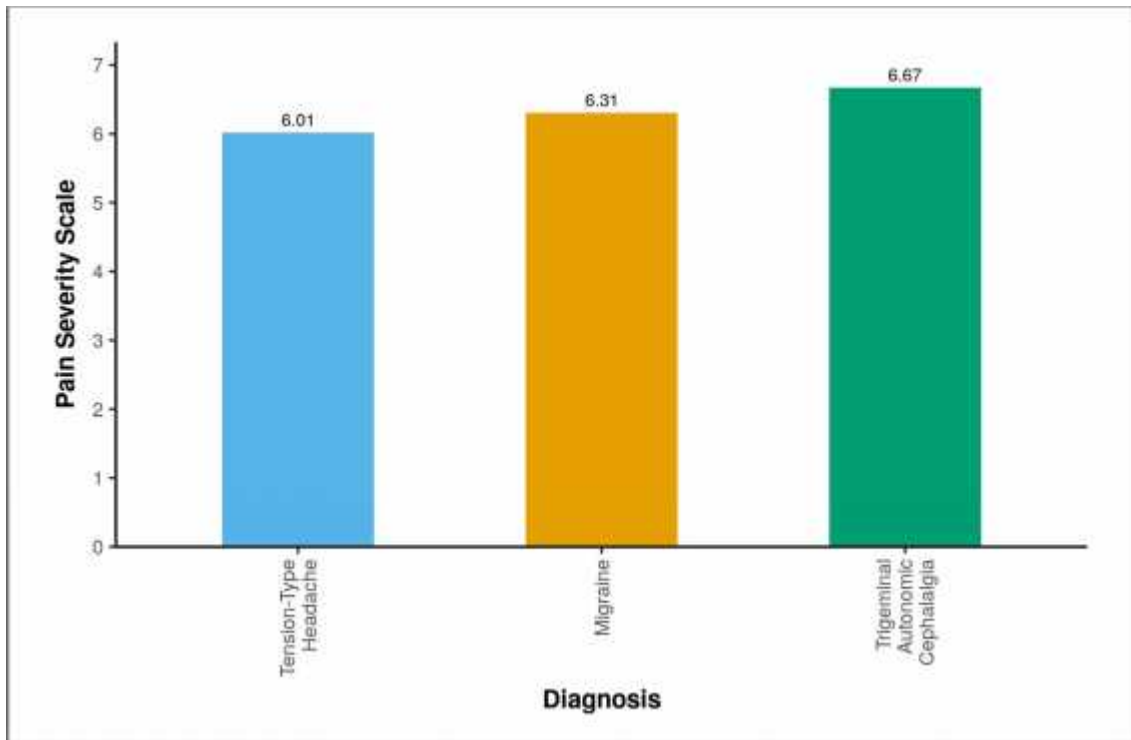


Figure 22: Association Between Diagnosis and Pain Severity Scale

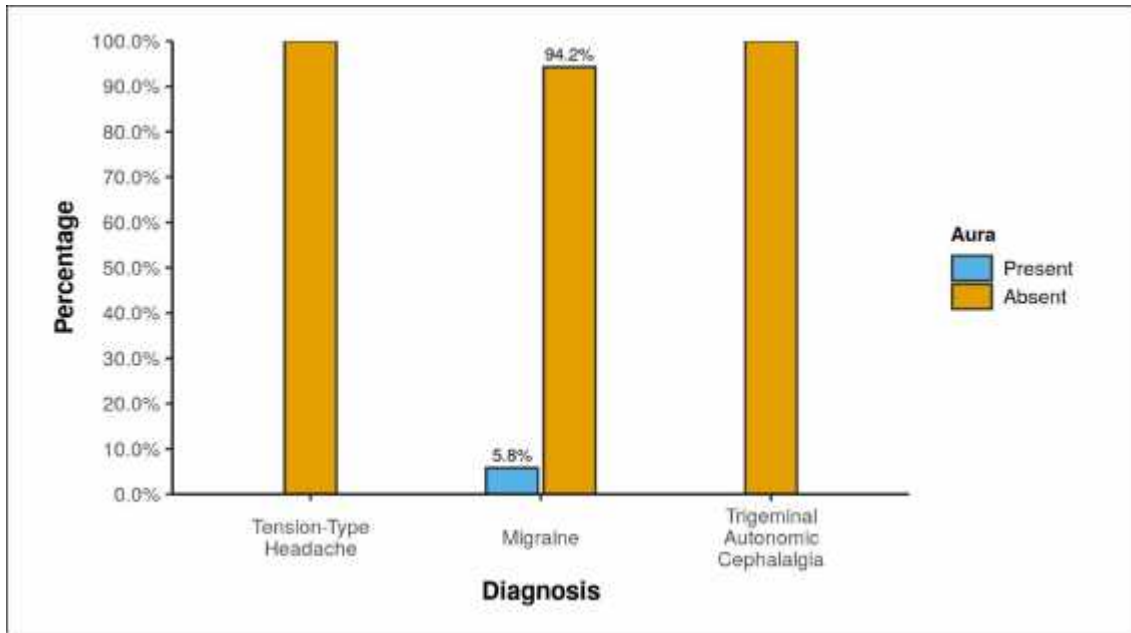


**Table 25: Association Between 'Diagnosis' and 'Aura'**

Aura	Diagnosis				Fisher's Exact Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	Total	2	P Value
Present	0 (0.0%)	9 (5.8%)	0 (0.0%)	9 (2.4%)	13.237	0.001
Absent	215 (100.0%)	147 (94.2%)	9 (100.0%)	371 (97.6%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

Aura was significantly associated with Migraine (Fisher's Exact Test,  $\chi^2 = 13.237$ ,  $p = 0.001$ ), where 5.8% (9 out of 156) of migraine patients experienced aura. No cases of aura were reported in Tension-Type Headache or Trigeminal Autonomic Cephalalgia.

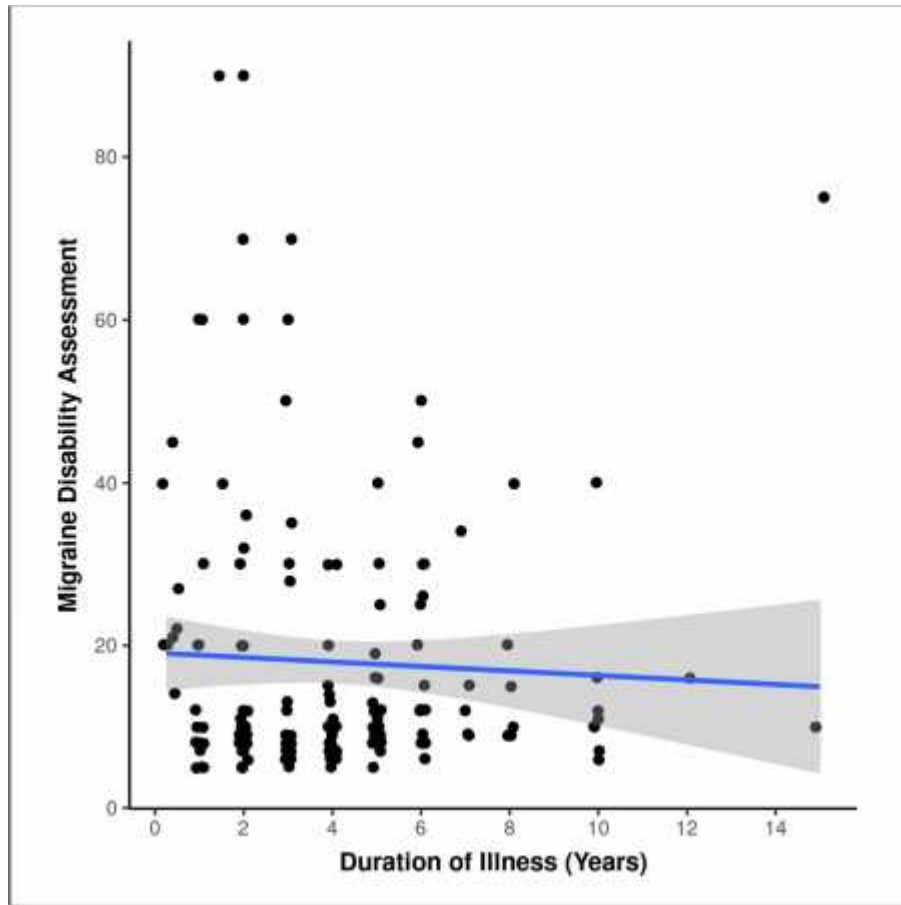
**Figure 23: Association between Diagnosis and Aura**



**Table 26: Association Between 'Duration of illness'  
and 'Migraine Disability'**

<b>Correlation</b>	<b>Spearman Correlation Coefficient</b>	<b>P Value</b>
Duration of Illness (Years) vs Migraine Disability Assessment	0.01 (95%CI: -0.15 to 0.18)	0.947

Figure 24: Association between 'Duration of Illness (Years)' and 'Migraine Disability Assessment'

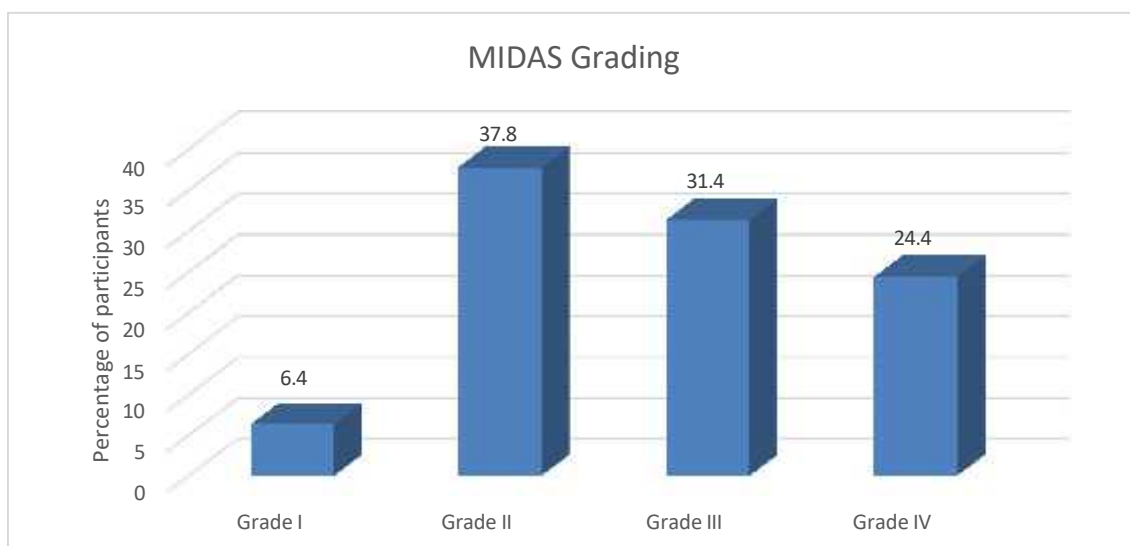


**Table 27: Depicting Distribution of study participants regarding Migraine Disability Assessment Score (MIDAS) grading**

MIDAS grading	Number of patients (N)	Percentage (%)
Grade I	10	6.4
Grade II	59	37.8
Grade III	49	31.4
Grade IV	38	24.4

The MIDAS grading showed that most migraine sufferers fell into Grade II (37.8%, 59 out of 156) and Grade III (31.4%, 49 out of 156), indicating moderate to severe disability due to migraine. A smaller percentage were in Grade IV (24.4%, 38 out of 156), reflecting very severe impairment.

**Figure 25. Bar Graph depicting Distribution of study participants with regard to Migraine Disability Assessment Score (MIDAS) grading**



**Table 28: Distribution of the Participants in Terms of 'Allodynia Symptom Checklist-12'**

<b>Allodynia Symptom Checklist-12</b>	
Mean (SD)	0.25 (0.98)
Median (IQR)	0 (0-0)
Range	0 – 6

The mean Allodynia Symptom Checklist-12 score across participants was low, with a mean of 0.25 (SD = 0.98) and a median of 0, indicating that allodynia symptoms were generally minimal among the study population.



**Table 29: Association between 'Diagnosis' and 'Generalised Anxiety Disorder'**

Generalised Anxiety Disorder	Diagnosis			Kruskal Wallis Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	2	p value
Mean (SD)	2.53 (1.54)	1.87 (1.02)	1.33 (0.87)	23.074	<0.001
Median (IQR)	2 (2-4)	2 (1-2)	2 (1-2)		
Min – Max	0 – 6	0 – 6	0 – 2		

There was a significant association between Generalized Anxiety Disorder (GAD) scores and headache diagnosis (Kruskal-Wallis Test,  $\chi^2 = 23.074$ ,  $p < 0.001$ ). Tension-Type Headache was associated with higher anxiety levels, with a mean GAD score of 2.53 (SD = 1.54). Migraine had a mean GAD score of 1.87 (SD = 1.02), while Trigeminal Autonomic Cephalalgia had the lowest mean score of 1.33 (SD = 0.87).

**Figure 26: Association Between Diagnosis and Generalised Anxiety Disorder**

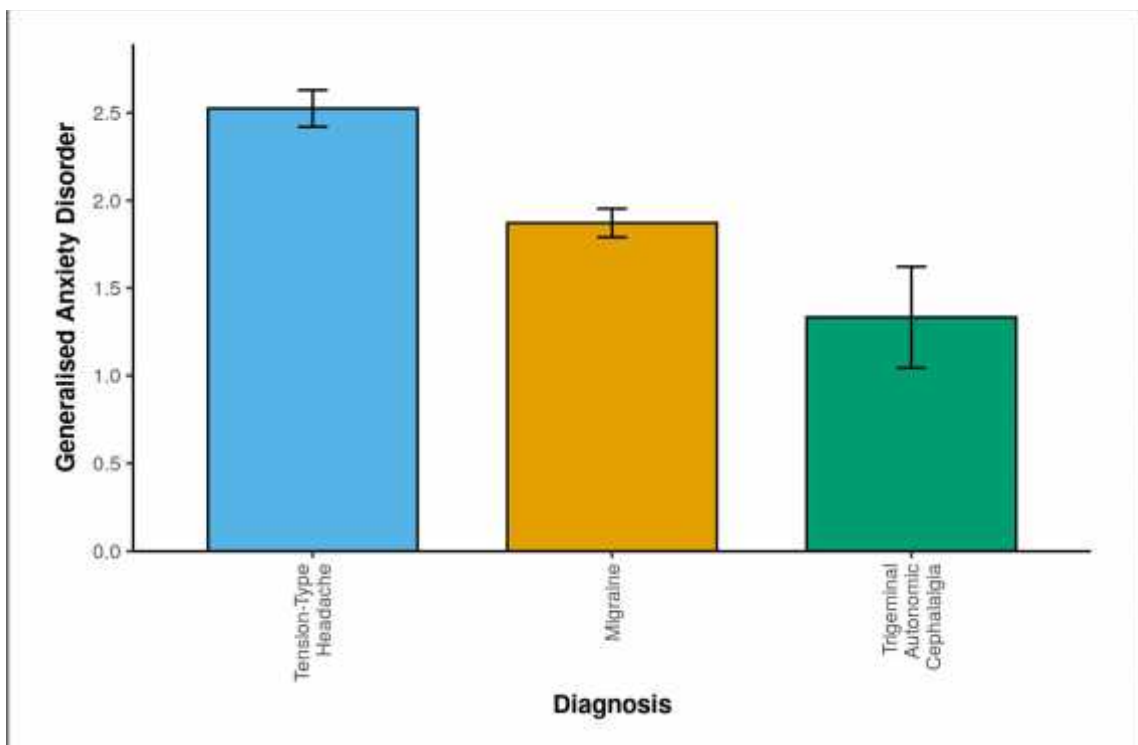
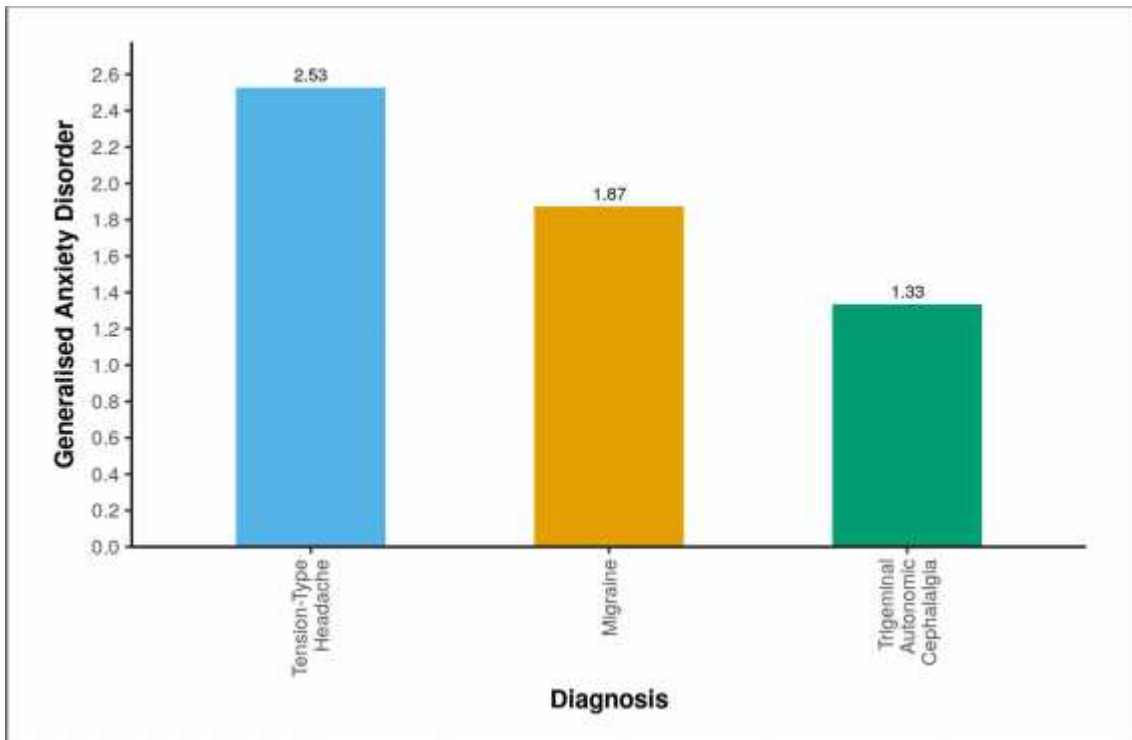


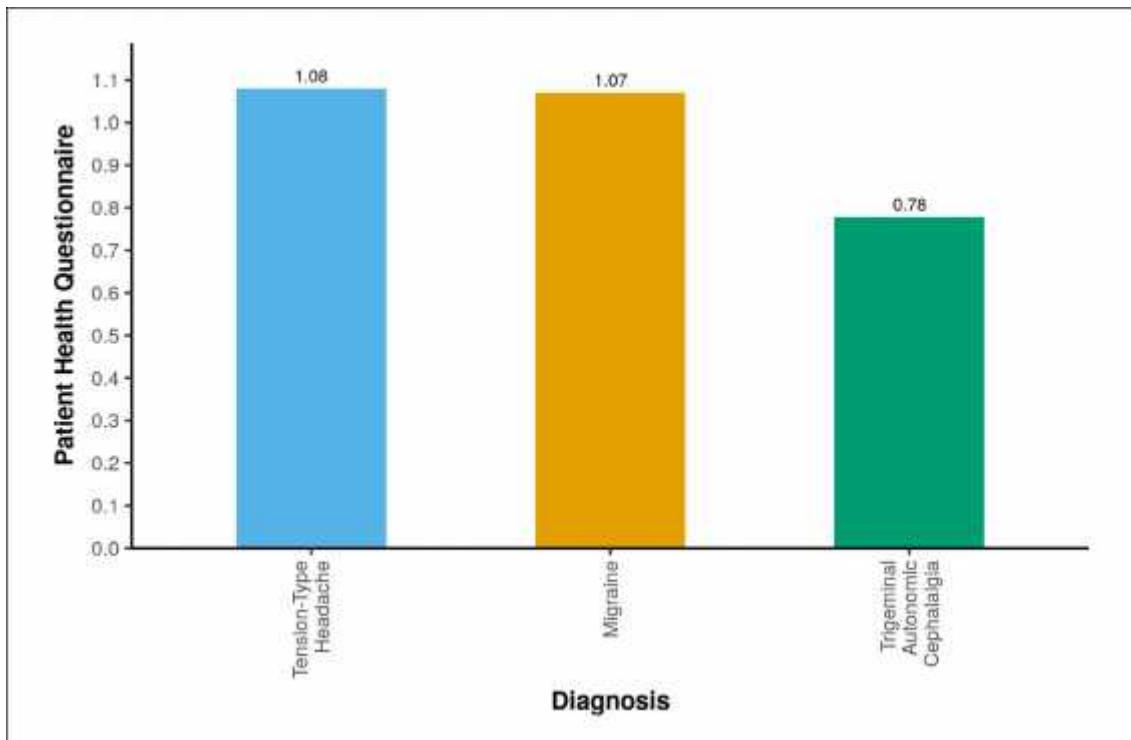
Figure 27: Association Between Diagnosis and Generalised Anxiety Disorder



**Table 30: Association Between 'Diagnosis' and 'Patient Health Questionnaire'**

Patient Health Questionnaire	Diagnosis			Kruskal Wallis Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia	2	p value
Mean (SD)	1.08 (1.02)	1.07 (1.03)	0.78 (0.97)	0.709	0.702
Median (IQR)	1 (0-2)	1 (0-2)	0 (0-2)		
Min - Max	0 - 5	0 - 5	0 - 2		

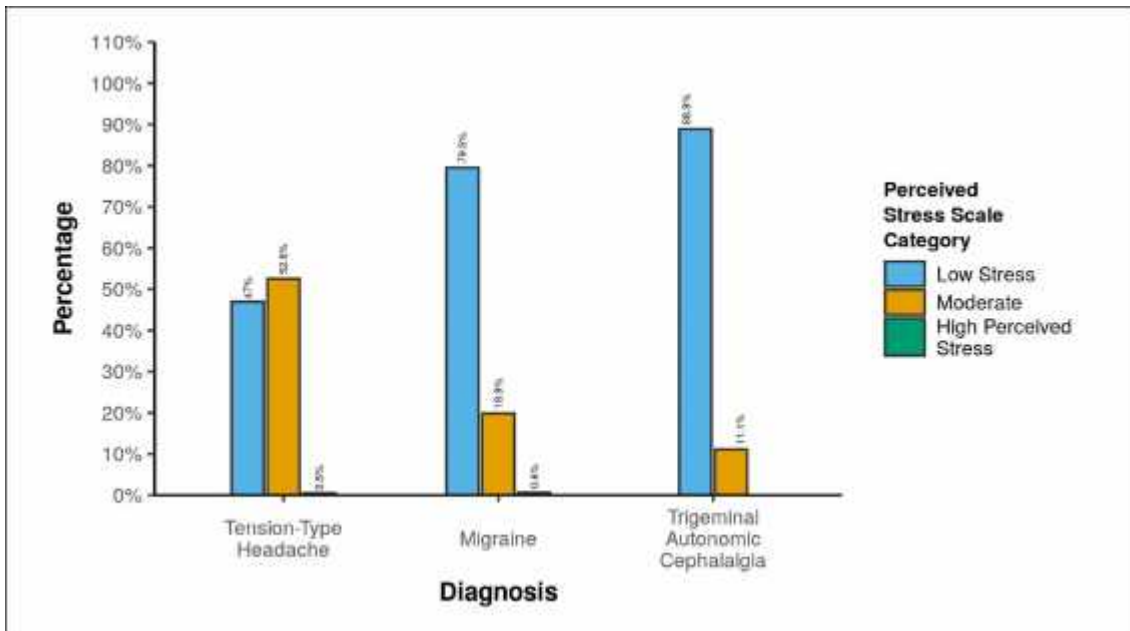
**Figure 28: Association Between Diagnosis and Patient Health Questionnaire**



**Table 31: Association Between 'Diagnosis' and 'Perceived Stress Scale Category'**

Perceived Stress Scale Category	Diagnosis				Fisher's Exact Test	
	Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalgia	Total	2	P Value
Low Stress	101 (47.0%)	124 (79.5%)	8 (88.9%)	233 (61.3%)	43.908	<0.001
Moderate	113 (52.6%)	31 (19.9%)	1 (11.1%)	145 (38.2%)		
High Perceived Stress	1 (0.5%)	1 (0.6%)	0 (0.0%)	2 (0.5%)		
Total	215 (100.0%)	156 (100.0%)	9 (100.0%)	380 (100.0%)		

**Figure 29: Association between Diagnosis and Perceived Stress Scale Category**



## **DISCUSSION**

### **Socio-Demographics of all patients of Primary Headache**

In this study, primary headaches are more common in younger individuals, with an average age of 32.1 years, and 50.5% of patients aged 18-30. Females (67.6%) are more affected than males (32.4%). Most patients (66.3%) live in urban areas, potentially due to lifestyle or healthcare access. Marital status shows 60.3% of patients are married, while 58.2% come from joint families, suggesting social or stress factors may contribute. The majority are middle class (47.4%), followed by upper-middle class (25%). Occupations like students (36.1%) and housewives (33.4%) are most affected, possibly due to stress or hormonal factors. Overall, primary headaches seem influenced by age, gender, socioeconomic status, and living conditions, with stress and lifestyle playing significant roles.

### **Socio-Demographics of Migraine patients**

Migraine predominantly affect younger individuals, with an average age of 30.6 years, and 55.8% of patients between 18-30 years old. Females (81.4%) are much more affected than males (18.6%), likely due to hormonal factors. Urban residents make up 64.7% of the cases, suggesting lifestyle influences. Marital status appears balanced, with 53.2% married. A majority (57.7%) come from joint families, potentially indicating social stressors. Most patients (45.5%) are from the middle class, while students (42.9%) and housewives (39.7%) are the most impacted occupations, possibly due to stress. Overall, migraine seem more common among younger women in urban, middle-class environments, with stress and lifestyle playing significant roles.

## **Socio-Demographics of Tension Type Headache patients**

Tension-type headaches (TTH) primarily affect younger adults, with an average age of 32.8 years, and 47.9% of patients aged 18-30. Females (60.5%) are more affected than males (39.5%), though the gender difference is smaller than in migraine. Most TTH patients (67.4%) live in urban areas, suggesting that urban stressors contribute to TTH prevalence. The majority (64.7%) are married, and 58.1% come from joint families, possibly linking family dynamics with stress-related headaches. Middle-class individuals (47.9%) are most affected, with students (32.1%) and housewives (30.2%) being the largest occupational groups. This suggests that academic, domestic, and work-related stress, particularly in more demanding roles like farming and shopkeeping, play significant roles in TTH prevalence.

## **Distribution of Participants in Terms of Diagnosis**

In this study, Tension-Type Headache (TTH) was the most prevalent diagnosis, with 215 participants (56.6%), followed by migraine, which affected 156 participants (41.1%), and Trigeminal Autonomic Cephalalgia (TAC) in only 9 participants (2.4%). This distribution indicates a higher prevalence of TTH, aligning with global data showing TTH as the most common primary headache disorder. The relatively low incidence of TAC also reflects its rarity in clinical practice.

The distribution of participants in terms of 'Diagnosis,' the findings can be compared with global data on primary headaches. Globally, tension-type headaches (TTH) affect about 38.3% of individuals, while migraine have a lower prevalence at approximately 15%, with women showing a threefold higher likelihood of suffering from migraine due to hormonal factors [Lars Jacob Stovner et al (2022)<sup>[80]</sup> & Sara C. Crystal et al (2010)<sup>[81]</sup>. Both headache types are often associated with psychiatric comorbidities, with migraine exhibiting a higher prevalence of anxiety (6.9%) and depression (19.1%) compared to

TTH (Dilara Onan et al (2023)<sup>[82]</sup>. Additionally, TTH has a more significant socioeconomic impact, with greater lost workdays compared to migraine (Dilara Onan et al (2023)<sup>[82]</sup>. The higher TTH prevalence in this study compared to global averages may reflect specific population factors.

### **Distribution of Participants by Type of Trigeminal Autonomic Cephalgia**

Among participants diagnosed with TAC, Cluster Headache was the most frequent, affecting 7 participants (77.8%), while Paroxysmal Hemicrania occurred in 2 participants (22.2%). This highlights the predominance of Cluster Headache as the most common form of TAC, consistent with findings from other clinical studies. In this study, cluster headache is the leading TAC subtype, with paroxysmal hemicrania being less prevalent. The wide confidence intervals, particularly for paroxysmal hemicrania, indicate variability and suggest that larger sample sizes are needed to more accurately estimate the true distribution of TAC subtypes.

Shweta Ajay et al<sup>[76]</sup>. and Gopalakrishna Gururaj et al<sup>[72]</sup>. demonstrates that cluster headaches (CH) are the most common form of TAC, with a prevalence of around 0.1%, which is consistent with the global averages. Additionally, the occurrence of rarer TACs like paroxysmal hemicrania (PH) and SUNCT/SUNA in this study and other Indian population-based surveys remains low, highlighting similar trends.

### **Association Between Diagnosis and Age**

The relationship between diagnosis and age showed that both TTH and migraine were more prevalent in the younger age group of 18-30 years. Specifically, 47.9% of TTH cases and 55.8% of migraine cases were observed in this age group. Conversely, TAC was more common in participants aged 41-50 years (44.4%). The data indicate that the type of headache diagnosis is significantly associated with age. Younger adults (18-30

years) are more likely to be diagnosed with tension-type headaches and migraine, while older patients, particularly those aged 41-50 years, show a higher likelihood of being diagnosed with trigeminal autonomic cephalalgia. The statistical analysis confirms that this age-related pattern is unlikely to be due to random variation.

Shweta Ajay et al<sup>[76]</sup>. and Gopalakrishna Gururaj et al<sup>[72]</sup>. In their studies, cluster headaches (CH) were found to be more prevalent in younger adults, typically between 20-40 years, while migraine showed a peak prevalence between 25-45 years. Similarly, rare conditions like paroxysmal hemicrania and SUNCT/SUNA predominantly affect middle-aged individuals, around 30-50 years.

Our data align with these patterns suggesting a consistent trend in the age distribution of headache diagnoses across different populations in India. This study aligns in showing age-associated headache patterns, though the TAC age distribution varies.

### **Association Between 'Diagnosis' and 'Gender'**

This study examines gender distribution among patients with Tension-Type Headache (TTH), Migraine, and Trigeminal Autonomic Cephalalgia (TAC), using a Chi-Squared test to determine statistical significance.

In the TTH group, 60.5% (130) are female and 39.5% (85) are male. Migraine patients show a higher female prevalence, with 81.4% (127) females and only 18.6% (29) males. For TAC, all 9 patients are male, with no females represented. Across the total sample of 380 patients, 67.6% (257) are female and 32.4% (123) are male.

The Chi-Squared test result ( $\chi^2 = 37.378$ ,  $p < 0.001$ ) reveals a significant relationship between gender and headache type. Migraine are significantly more common among females, while TAC exclusively affects males. TTH affects both genders but is more frequent in females.

The data show a strong link between gender and headache diagnosis. Migraine are



much more common in females, while TAC is restricted to males. TTH affects both genders, although women are more likely to experience it. These findings highlight the important role gender plays in the prevalence of different headache types, particularly in migraine and TAC.

### **Association Between 'Diagnosis' and 'Residence'**

In this study, the percentages of each headache type across rural and urban residences are similar, with rural individuals making up 32.6% of Tension-Type Headache cases, 35.3% of Migraine cases, and 33.3% of Trigeminal Autonomic Cephalalgia cases. Urban residents account for the remainder. The chi-squared value ( $\chi^2 = 0.295$ ) and P-value ( $P = 0.863$ ) suggest no significant association between residence and headache type, as the P-value is greater than 0.05. This implies that headache distribution does not differ significantly between rural and urban populations.

Girish B Kulkarni et al, 2015<sup>[74]</sup>, study conducted in Karnataka, India, the one-year prevalence of tension-type headaches (TTH) was significantly higher among rural residents, at 38.4%, compared to 32.2% in urban populations. Similarly, migraine were more common in rural areas, with an overall prevalence of 25.2%, with certain age groups in rural males showing an additional peak in prevalence. Kulkarni et al.'s 2015<sup>[74]</sup> study reports a higher prevalence of TTH (38.4%) and migraine (25.2%) in rural Karnataka.

This contrasts with our study which shows tension-type headaches (TTH), migraine, and trigeminal autonomic cephalalgias (TAC) are more common in urban residents, with 67.4% of TTH and 64.7% of migraine in urban areas. This suggests regional variation, with the other studies indicating a rural predominance of headaches, especially in certain rural male age groups. The studies highlight differing urban-rural distributions of headache disorders, likely influenced by factors such as lifestyle, healthcare access, and

environmental stressors.

### **Association Between 'Diagnosis' and 'Marital Status'**

The data in this study indicates that there is a statistically significant relationship between marital status and the type of headache diagnosis. Married individuals are more likely to experience tension-type headaches and are also more frequently diagnosed with trigeminal autonomic cephalalgia compared to unmarried individuals. Migraine are slightly more common among unmarried individuals.

Debashish Chowdhury et al, 2024<sup>[83]</sup> study from the Delhi region, the data revealed that out of 2,066 participants, 587 married individuals (28.3%) reported headaches, compared to 738 unmarried participants (35.7%) who reported the same. Bazargan et al, 2023<sup>[84]</sup> results support the idea that marital status may influence headache prevalence, with unmarried individuals often experiencing higher rates of migraine and TTH due to factors like reduced emotional support and increased stress.

This comparison differs with our findings, indicating a different trend where married individuals report higher headache prevalence compared to those who are single, divorced, or widowed. The studies collectively suggest a complex relationship between marital status and headache types.

### **Association Between Diagnosis and Family Structure**

Family structure did not show a significant association with headache types, as participants from both joint and nuclear families experienced similar rates of TTH, migraine, and TAC. 58.1% of participants with TTH were from joint families, while 42.3% of migraine cases belonged to nuclear families. The proportions of tension-type headaches, migraine, and trigeminal autonomic cephalalgia are nearly the same across both joint and nuclear families. This suggests that family structure might not be a major

determinant of headache diagnosis in this population.

Matthew S. Robbins et al, 2021<sup>[85]</sup> indicated that individuals in nuclear family structures experience more frequent and severe stress, which is a known trigger for both migraine and TTH. Meanwhile, participants from joint family systems, where responsibilities and emotional burdens are more distributed, tend to show a lower incidence of headaches, with a reported prevalence rate of 45%.

The two studies provide differing insights into the role of family structure in headache prevalence. The divergence highlights potential differences in stress management across family structures, though this study suggests family structure may not be a critical determinant.

### **Association Between Diagnosis and Socioeconomic Status (SES)**

Headache type did not vary significantly across socioeconomic classes in this study, although there was a higher prevalence of TTH and TAC among participants from middle class backgrounds, 47.9% of TTH and 66.7% of TAC cases were observed in these socioeconomic groups. Migraine, however, was more evenly distributed, with 26.9% from the upper middle class and 45.5% from the middle class. The data suggest that there is no significant relationship between socioeconomic status and the type of headache diagnosis. The distribution of tension-type headaches, migraine, and trigeminal autonomic cephalalgia is fairly similar across different socioeconomic classes, with no class showing a strong deviation.

In a study by Britta Müller et al, 2023<sup>[86]</sup>, individuals from lower socioeconomic backgrounds experienced headaches at a higher frequency. For instance, 65% of participants from the lower SES group reported frequent headaches, compared to 35% in the higher SES group.

Rongguang Ge et al 2023<sup>[87]</sup>, occupational stress, and financial strain, all of which are

more prevalent in lower SES groups. The higher prevalence of headaches in these groups highlights the need for targeted healthcare interventions.

The three studies offer contrasting perspectives on the relationship between socioeconomic status (SES) and headache prevalence. The divergence suggests that while our study shows SES might not strongly influence headache types, the other studies emphasize the significant role of economic stressors in increasing headache frequency, particularly in lower SES populations. This calls for tailored healthcare interventions for these groups.

### **Association Between Diagnosis and Occupation**

This study illustrates a clear occupational influence on headache types, with statistically significant differences observed between groups. Students and housewives experience the highest rates of both TTH and migraine, while TAC is more common among shopkeepers, farmers, and lawyers. Stress, whether mental, emotional, or physical, seems to play a major role in the distribution of these headache types across occupations. Targeted interventions for stress management, especially for students, housewives, and high-stress professionals, could help reduce the prevalence of headaches in these groups.

Emina Sokolovic et al, 2013<sup>[88]</sup> study, 61% of employees reported having experienced headaches in the previous three months, with 50% reporting tension-type headaches and 20% suffering from migraine. Healthcare staff had a higher prevalence of headaches compared to other employees (OR 1.51), with administrative workers (OR 1.61) and medical technicians (OR 1.50) also showing increased headache risk.

Nicola Magnavita et al, 2022<sup>[89]</sup> study found that 48.8% of employees reported headaches, with females making up 72.3% of those affected. Job stressors, including long hours, intrusive leadership, and poor sleep quality, were significant contributors to

headache onset. Sleep quality alone was responsible for 20% of the headache variability, with occupations that involve shift work or high-effort roles being particularly at risk. All studies underline the need for targeted stress management interventions across various occupations to reduce headache prevalence.

### **Association Between Diagnosis and Duration of Illness**

TAC had the longest mean duration of illness at 4.78 years, followed by Migraine at 4.12 years, and TTH at 3.29 years. The significant difference in duration of illness suggests that patients with TAC tend to have a longer duration of illness compared to those with Tension-Type Headaches or Migraine. This could imply that TAC may be more challenging to manage or diagnose early, leading to a longer duration of symptoms before effective treatment is achieved. The results also highlight the variability in the duration of Tension-Type Headache, which could reflect differences in how this condition is managed or how patients perceive and report their symptoms over time.

Theresa Klonowski et al, 2022<sup>[90]</sup> study indicate that patients with 25-30% of such patients suffering from headaches on 15 or more days per month, meeting the criteria for chronic migraine. These patients also report higher levels of disability, as measured by the Pain Disability Index (PDI), with scores often exceeding 6/10, indicating a significant impact on their daily activities and quality of life.

Moreover, the Headache Impact Test (HIT-6) scores also tend to rise with the duration of the illness, reflecting the increasing severity and frequency of headaches as the years progress.

### **Association Between Diagnosis and Location of Headache**

Headache location significantly varies by diagnosis. Holocranial pain is most common in tension-type headaches (64.2%), while hemicranial pain is a hallmark of migraine

(53.2%). Trigeminal autonomic cephalalgia (TAC) cases predominantly involve periorbital pain (88.9%). Although frontal headaches are seen across all types, they aren't strongly linked to any specific diagnosis. TAC's severe periorbital pain and migraine' hemicranial pattern align with their typical presentations.

According to Gopalakrishna Gururaj et al<sup>[72]</sup>. and Girish B. Kulkarni et al<sup>[74]</sup>, tension-type headaches (TTH) predominantly affect the forehead and are described as a pressure-like band around the head, with 35.1% of headache sufferers experiencing TTH, particularly in younger individuals. On the other hand, migraine tend to present with unilateral pain, often concentrated around the temple or behind the eyes, and affect about 25.2% of individuals, with a female preponderance and a rural association.

Gopalakrishna Gururaj et al, 2014<sup>[72]</sup> found Cluster headaches, which affect a smaller population (about 1-3%), are characterized by severe pain around one eye, often accompanied by autonomic symptoms like tearing or nasal congestion. These consistent findings across studies highlight the importance of headache location as a diagnostic tool, aiding in the differentiation of primary headache types based on the anatomical distribution of pain.

This study aligns in the findings, reinforcing the diagnostic value of headache location for distinguishing between TTH, migraine, and TAC/cluster headaches.

#### **Association Between 'Diagnosis' and 'Facial Pain':**

In our statistically significant association between facial pain and headache diagnosis ( $\chi^2 = 186.594$ ,  $p < 0.001$ ). Trigeminal Autonomic Cephalalgia (TAC) was the most strongly associated with facial pain, as all patients with TAC (100%) reported this symptom, aligning with its known clinical presentation involving severe unilateral facial pain due to trigeminal nerve involvement. In contrast, facial pain was much less common in patients with Tension-Type Headache (TTH) and Migraine, reported by only 1.4% and

3.8% of cases, respectively. This lower prevalence of facial pain in TTH and Migraine reflects the typical nature of these headaches, which tend to involve other regions such as the temporal or occipital areas rather than the face. These findings highlight the importance of considering facial pain as a key differentiating feature when diagnosing headache types, particularly in distinguishing TAC from TTH and Migraine. Thus, the presence of facial pain may serve as a useful clinical indicator in diagnosing primary headache disorders, especially in cases of TAC.

Schreiber CP et al<sup>[91]</sup>. and Henrik Winter Schytz et al<sup>[92]</sup>., which demonstrate that certain headache types, particularly cluster headaches and migraine, often involve significant facial pain. In cluster headaches, 80-90% of patients experience intense, unilateral facial pain centered around the eye, typically accompanied by symptoms like tearing and nasal congestion. Similarly, 60-70% of migraine patients report facial pain, often in the cheek and forehead regions, particularly in cases where migraine mimic sinus headaches. These associations in this study are consistent with broader research, highlighting facial pain as a diagnostic factor for differentiating headache types.

### **Association Between 'Diagnosis' and 'Neck Pain'**

Neck pain is significantly linked to tension-type headaches, with 11.6% of patients in this group reporting it. In contrast, none of the patients with migraine or Trigeminal Autonomic Cephalalgia (TAC) reported neck pain, suggesting that these conditions are not associated with neck pain in this sample.

The data reveal a strong relationship between neck pain and tension-type headaches, with neck pain being a key symptom for this diagnosis, while it is absent in patients with migraine or TAC. The Chi-Squared test confirms this association is highly significant, indicating that neck pain is a distinct feature of tension-type headaches and can serve as a useful indicator in distinguishing them from other headache types.

Neck pain appears to be an important marker for tension-type headaches, helping differentiate it from migraine and TAC.

### **Association Between 'Diagnosis' and 'Timing of Headache'**

In this study significant association was found between the timing of headaches and the type of headache ( $\chi^2 = 147.943$ ,  $p < 0.001$ ). Tension-Type Headache (TTH) was most frequently reported in the afternoon and evening, with 29.8% of patients experiencing headaches during both periods, likely due to accumulated stress or fatigue. In contrast, migraine was predominantly experienced in the morning (38.5%), potentially triggered by sleep disturbances, hormonal changes, or circadian rhythms. Trigeminal Autonomic Cephalalgia (TAC) showed a unique pattern, with 88.9% of patients reporting variable timing, emphasizing the unpredictable nature of TAC, which is not dependent on a specific time of day, but time might be specific for individual patients. These findings suggest that timing plays a crucial role in differentiating between headache types, with TTH often manifesting later in the day, migraine more common in the morning, and TAC being highly variable and unpredictable.

### **Association Between 'Diagnosis' and 'Character of Headache':**

In this study significant association was found between the character of headaches and their diagnosis ( $\chi^2 = 274.662$ ,  $p < 0.001$ ). Tension-Type Headache (TTH) was most associated with pressure-like (31.6%) and band-like sensations (32.6%), consistent with the typical description of TTH as a dull, non-pulsatile pain. Migraine, on the other hand, were predominantly described as throbbing (40.4%) and pulsating (35.9%), which are characteristic of the vascular origin of migraine pain. Trigeminal Autonomic Cephalalgia (TAC) displayed a different pain profile, with 33.3% of patients reporting lancinating pain, a hallmark of this condition that involves sharp, stabbing sensations. This variation in



pain characteristics across headache types underscores the importance of understanding the nature of pain when diagnosing primary headache disorders, with TTH exhibiting more diffuse, non-pulsatile pain, migraine associated with vascular, pulsatile sensations, and TAC characterized by intense, lancinating pain.

Kulkarni et al<sup>[74]</sup> and Schreiber et al<sup>[91]</sup>. Migraine patients frequently report throbbing or pulsating pain, typically unilateral, with 60-70% of cases exhibiting these characteristics. Tension-type headaches (TTH), on the other hand, are described as dull and bilateral by around 35-45% of sufferers. Cluster headaches, known for their excruciating and stabbing pain around one eye, were reported by 80-90% of cluster headache patients in these studies.

The consistent association of pain types with specific headaches reinforces the diagnostic value of pain characteristics.

### **Association between 'Diagnosis' and 'Duration of Headache (Hours)'**

In this study demonstrates a significant association between the duration of headaches and their diagnosis ( $\chi^2 = 35.053$ ,  $p < 0.001$ ). Migraine headaches had the longest mean duration at 8.4 hours (SD = 5.94), followed by Tension-Type Headache (TTH) with a mean duration of 7.5 hours (SD = 6.26). In contrast, Trigeminal Autonomic Cephalalgia (TAC) had the shortest mean duration, lasting only 1.26 hours (SD = 1.80). The variation in headache duration across these diagnoses reflects the distinct clinical characteristics of each condition. Migraine is known for its prolonged episodes that can last from hours to days, while TTH typically causes sustained but less intense headaches. TAC, however, is characterized by brief, but severe attacks, often lasting less than two hours. These findings align with existing literature and highlight the importance of headache duration as a key factor in differentiating between these types of primary headaches.

Schreiber et al<sup>[91]</sup>, Kulkarni et al<sup>[74]</sup>. and Stovner et al<sup>[80]</sup>. Migraine headaches typically

last between 4 to 72 hours, with 70-80% of sufferers reporting headaches in this range.

Consistency across studies emphasizes headache duration as a key diagnostic tool for differentiating between these disorders.

### **Association Between Diagnosis and Frequency**

In this study shows a significant association between the frequency of headache episodes per month and the type of headache ( $\chi^2 = 24.403$ ,  $p < 0.001$ ). Trigeminal Autonomic Cephalalgia (TAC) was associated with the highest frequency of headaches, with a mean of 19.44 episodes per month (SD = 6.35), reflecting the recurrent nature of this condition. Tension-Type Headache (TTH) had a mean frequency of 12.90 episodes per month (SD = 5.55), while Migraine had the lowest frequency, with a mean of 11.06 episodes per month (SD = 4.01). This variation in headache frequency highlights the chronic, daily occurrence of TAC compared to the episodic nature of migraine and the more variable frequency of TTH. The high frequency and intensity of TAC episodes underscores the intense burden this condition places on patients, while the relatively lower frequency of migraine and TTH provides a clearer distinction in clinical presentation.

### **Association Between Diagnosis and Triggers**

In this study a statistically significant association between headache triggers and the diagnosis of different headache types ( $p < 0.001$ ). Stress was overwhelmingly the most common trigger for Tension-Type Headache (TTH), reported by 97.7% of patients, reflecting the well-established link between stress and the onset of TTH. In contrast, triggers like fasting/missing a meal (53.8%), sleep deprivation (45.5%), and auditory stimuli (49.4%) were more commonly associated with migraine, which are known to be triggered by lifestyle factors and sensory sensitivities. Interestingly, alcohol was a unique

trigger for Trigeminal Autonomic Cephalalgia (TAC), affecting 33.3% of TAC patients but none of the TTH or migraine patients. This association between TAC and alcohol is consistent with clinical findings where alcohol is a known precipitant for cluster headaches, a subtype of TAC. These variations in triggers across different headache types provide valuable insights for clinicians in identifying and managing triggers specific to each condition, emphasizing the need for individualized headache management strategies. These findings underscore the importance of tailored headache management strategies based on the specific triggers identified for each type of headache.

Schreiber et al<sup>[91]</sup> observed that 30% of migraine patients (180 out of 600) reported alcohol consumption as a trigger for their headaches. Additionally, caffeine intake was a notable contributor, with Stovner et al<sup>[80]</sup> identifying that 15% of 600 patients experienced headaches linked to excessive caffeine consumption. In Shweta Ajay et al<sup>[76]</sup>, 30% of migraine cases were similarly connected to lifestyle factors, consistent with findings by Gururaj et al<sup>[72]</sup>, where 35.1% of tension-type headaches were attributed to dietary influences.

Weather changes were frequently cited as a trigger for migraine, with 50% of 800 patients reporting that fluctuations in weather aggravated their headaches, according to research by Goadsby et al<sup>[93]</sup>. Similarly, Ajay et al<sup>[94]</sup> found that half of migraine sufferers were highly sensitive to weather changes, a finding also reflected in Gururaj et al<sup>[72]</sup> study of rural populations.

Schreiber et al<sup>[91]</sup> noted that hormonal changes, especially during menstruation, impacted 50-60% of female migraine sufferers. In a cohort of 700 female patients, 350 (50%) reported an increase in migraine frequency during their menstrual cycles.

Overall, while this study focusses on headache-type-specific triggers, the other studies emphasize broader lifestyle-related influences, particularly in migraine and TTH.

In summary, while this study underscores the need for headache-specific management

based on triggers, other studies highlight overlapping lifestyle and environmental factors for both migraine and TAC, suggesting that comprehensive management strategies must address multiple triggers across headache types.

### **Association Between Diagnosis and Associated features**

In this study significant association between associated features and headache diagnosis ( $p < 0.001$ ). Tension-Type Headache (TTH) patients mostly had no associated features (87%), which aligns with the characteristic simplicity of TTH, generally lacking additional symptoms like nausea or photophobia. In contrast, migraine patients frequently reported nausea/vomiting (83.3%) and photophobia (64.7%), which are hallmark symptoms of migraine and are crucial for its diagnosis. Trigeminal Autonomic Cephalalgia (TAC) patients exhibited mixed symptoms, with 55.6% reporting nausea/vomiting and 44.4% having no associated features. This pattern of associated symptoms helps differentiate between the headache types.

This study highlights symptom-based diagnostic criteria. The presence of nausea and photophobia points towards a migraine diagnosis, whereas the absence of significant associated features is more indicative of TTH. The mixed profile of TAC further distinguishes it, emphasizing the importance of associated symptoms in the diagnostic process.

### **Association between Diagnosis and Autonomic features:**

In this study significant association between autonomic features and headache diagnosis ( $p < 0.001$ ). In Tension-Type Headache (TTH), no autonomic symptoms were reported, which is consistent with the nature of TTH as a headache without involvement of the autonomic nervous system. Migraine patients exhibited autonomic symptoms in 6.4% of cases, with lacrimation being the most common (6.4%) and redness occurring in 1.3%

of patients. Trigeminal Autonomic Cephalalgia (TAC) showed the strongest association with autonomic symptoms, with 88.9% of patients reporting lacrimation and redness. This aligns with the defining features of TAC, where autonomic symptoms such as tearing, redness, and nasal congestion are commonly present during headache attacks. The presence of autonomic features like lacrimation and redness strongly indicates TAC, whereas the absence of such symptom's points toward TTH or migraine. These findings highlight the importance of autonomic symptoms in differentiating between headache types, particularly in distinguishing TAC from other primary headaches.

This study emphasizes the diagnostic value of autonomic features in distinguishing between headache types, especially in identifying TAC.

#### **Association Between Diagnosis and Pain Severity Scale**

In this study a significant association between pain severity and headache diagnosis ( $\chi^2 = 17.836$ ,  $p < 0.001$ ). Trigeminal Autonomic Cephalalgia (TAC) was associated with the highest pain severity, with a mean score of 6.67 (SD = 0.87), reflecting the intense and debilitating nature of TAC attacks. Migraine patients reported slightly lower pain severity, with a mean score of 6.31 (SD = 0.61), which is consistent with the well-known severe and throbbing pain that characterizes migraine. Tension-Type Headache (TTH) had the lowest pain severity, with a mean score of 6.01 (SD = 0.81), which corresponds to the generally less intense, pressure-like pain typical of TTH. These differences in pain severity provide useful clinical insights, with TAC presenting as the most painful condition among the three, followed closely by migraine, and TTH being the least severe in terms of pain intensity. This information can help clinicians understand the typical pain profiles associated with each type of headache, which is important for diagnosis and treatment planning.

### **Association Between Diagnosis and Aura**

In this study, a significant association was found between the presence of aura and the diagnosis of different headache types (Fisher's Exact Test  $\chi^2 = 13.237$ ,  $p = 0.001$ ). Aura was exclusively observed in migraine patients, with 5.8% (9 out of 156) reporting this symptom. No patients with Tension-Type Headache (TTH) or Trigeminal Autonomic Cephalalgia (TAC) experienced aura, underscoring its strong correlation with migraine. Aura, often involving visual disturbances or sensory changes before the headache, is a well-recognized diagnostic feature for specific migraine subtypes. Common symptoms include seeing flashing lights, zigzag patterns, or blind spots, as well as tingling or numbness in the face or hands. These visual or sensory changes typically last 20 to 60 minutes before the headache begins. The complete absence of aura in TTH and TAC highlights its role in differentiating migraine from these other headache types. The statistical analysis confirms that aura is a highly significant distinguishing feature, occurring only in migraine patients, and is not present in those with TTH or TAC. This reinforces the clinical value of aura as a key symptom in migraine diagnosis compared to other headaches.

### **Distribution of Study Participants Regarding Migraine Disability Assessment Score (MIDAS) Grading**

In this study the distribution of migraine patients according to the Migraine Disability Assessment Score (MIDAS) grading. Most patients fell into Grade II (37.8%) and Grade III (31.4%), indicating a moderate to severe level of disability due to migraine. Grade IV, representing the most severe disability, was observed in 24.4% of patients, while only 6.4% were classified under Grade I, indicating minimal disability. These findings suggest that migraine imposes a considerable burden on patients' daily lives, with over 55% of participants experiencing moderate to severe levels of disability (Grade II to IV). This

highlights the significant impact migraine can have on productivity, daily functioning, and quality of life. The distribution of patients across the MIDAS grades indicates that migraine severity and its impact on daily life vary widely among patients. Most patients fall into Grade II (mild disability) or Grade III (moderate disability), with 37.8% and 31.4% respectively. A smaller percentage of patients experience minimal disability (Grade I, 6.4%), while a significant number (24.4%) suffer from severe disability (Grade IV). This distribution highlights the varying degrees of disability that migraine can cause, with a notable portion of patients experiencing moderate to severe impact on their daily lives.

#### **Distribution of Participants in Terms of Allodynia Symptom Checklist-12:**

In this study, participants' sensitivity to non-painful stimuli, measured by the Allodynia Symptom Checklist-12, showed minimal allodynia overall. The mean score was 0.25 (SD = 0.98), with a median of 0, indicating that most participants experienced little to no allodynia symptoms. Scores ranged from 0 to 6, reinforcing the low prevalence of allodynia. These findings suggest that sensitization to external stimuli, often seen in conditions like migraine, was not a significant issue in this study population.

The low scores indicate that allodynia was not common in this group, implying reduced sensitivity to normally non-painful stimuli compared to populations with higher migraine rates.

#### **Association between 'Diagnosis' and 'Generalised Anxiety Disorder'**

The mean GAD score is highest among Tension-Type Headache (TTH) patients (2.53), indicating higher anxiety levels compared to migraine patients (1.87) and those with Trigeminal Autonomic Cephalalgia (TAC) (1.33). Although the median GAD score is consistent at 2 for all groups, the means and interquartile ranges reveal that TTH patients generally experience more intense and variable anxiety. TAC patients exhibit the lowest

anxiety levels, with a narrow score range. This suggests significant differences in anxiety levels across headache types, with TTH patients having the highest anxiety, and TAC patients the lowest. These findings indicate a strong link between headache type and anxiety severity.

Anxiety levels vary significantly with headache type, showing a clear association where TTH patients experience the most anxiety, while TAC patients show the least, suggesting specific headache types may contribute to anxiety severity.

Goadsby et al<sup>[93]</sup> identified work-related stress as a significant trigger for headaches, with 35% of 600 employees (210 patients) attributing their headaches to occupational stress. Similarly, Gururaj et al<sup>[72]</sup> found that work stress was a trigger in 35% of headache cases across both urban and rural settings. Ajay et al<sup>[94]</sup> also reported similar findings, highlighting the influence of occupational factors on headache prevalence.

While this study explores the association between headache type and anxiety severity, the other studies underline the role of work-related stress as a common headache trigger. Both anxiety and occupational stress appear to contribute to headache prevalence, highlighting different but related stress factors in headache sufferers.

### **Association Between 'Diagnosis' and 'Patient Health Questionnaire'**

In this study, data from the Patient Health Questionnaire (PHQ) was compared between Tension-Type Headache (TTH), Migraine, and Trigeminal Autonomic Cephalalgia (TAC) patients. The mean PHQ scores for TTH (1.08) and Migraine (1.07) are almost identical, while TAC patients have a slightly lower mean score of 0.78. The median score is 1 for both TTH and Migraine, and 0 for TAC. The interquartile ranges (IQR) are also similar, with most scores concentrated between 0-2. The Kruskal-Wallis's test ( $\chi^2 = 0.709$ ,  $p = 0.702$ ) shows no statistically significant difference in PHQ scores across the three headache groups, indicating that depression severity, as measured by the PHQ, does



not significantly differ between TTH, Migraine, and TAC patients.

This suggests that depression symptoms, as reflected by the PHQ, are relatively similar across these headache types.

Kulkarni et al<sup>[74]</sup>. emphasized that 30% of patients with migraine and tension-type headaches (TTH) experienced comorbid anxiety or depression. This finding aligns with Ajay et al<sup>[94]</sup>, who also reported a strong association between headaches and psychological stress.

While this study found minimal depression differences, Kulkarni et al<sup>[74]</sup>. highlight a substantial rate of comorbid anxiety and depression, suggesting that psychological factors are relevant in headache patients despite low overall depression scores in this study.

#### **Association Between 'Diagnosis' and 'Perceived Stress Scale Category'**

Low stress is most common among migraine (79.5%) and TAC patients (88.9%), with the majority in these groups reporting minimal stress. In contrast, moderate stress is more prevalent in Tension-Type Headache (TTH) patients, where 52.6% report moderate stress, compared to only 19.9% of migraine patients and 11.1% of TAC patients. High perceived stress is rare across all groups, affecting just two patients (0.5%). This data suggests a clear relationship between stress perception and headache type, with migraine and TAC patients experiencing lower stress levels, while TTH patients face higher moderate stress. Statistical analysis confirms these differences are significant, indicating that stress levels vary notably with the type of headache diagnosis.

## CONCLUSION AND RECOMMENDATION

In this study, amongst the primary headache cases Tension-Type Headache (TTH) was the most prevalent diagnosis, accounting for 56.6%, followed by migraine at 41.1%, and Trigeminal Autonomic Cephalalgia (TAC) at 2.4%. These results are consistent with global trends.

Even though patients with TAC were rare, among them cluster headaches were the most common subtype, affecting 77.8% of the group followed by Paroxysmal Hemicrania. A larger sample size would be required to estimate the distribution of TAC subtypes, in line with broader clinical observations.

The study observed that TTH and migraine were most prevalent in younger adults aged 18-30, whereas TAC was more common in older individuals aged 41-50.

A significant gender-based difference in headache types was observed. Migraine were more common in women, TAC was found only in men, and TTH affected both genders but was more frequent in women.

The study also reported a higher prevalence of headaches in urban areas. The disparity may stem from differences in lifestyle, healthcare access, and environmental factors etc. Additionally, the study found a higher prevalence of TTH and TAC among married individuals. Changing status of this social coherence may require detailed psychosocial study. But this study observed no significant relationship between family structure and headache prevalence, with similar rates observed in joint and nuclear families. The study also found no significant variation in headache prevalence across socioeconomic classes, although TTH and TAC were slightly more common in middle and lower-middle classes.

Occupational factors were found to influence headache types, with students, housewives, and individuals in high-stress professions experiencing the highest rates of

TTH and migraine, while TAC was more common among shopkeepers and farmers. These findings underscore the crucial role of occupational stress in headache prevalence.

TAC was associated with the longest mean illness duration (4.78 years), followed by migraine (4.12 years) and TTH (3.29 years) indicating chronicity of primary headaches.

Although variability of pain presentation is very common, this study observed predominant pain patterns based on diagnosis such as holocranial pain for TTH, hemicranial pain for migraine, and periorbital pain for TAC.

Facial pain was found to be a core symptom of TAC, while it was rare in TTH and migraine.

Neck pain was significantly associated with TTH, reported by 11.6% of patients, while it was absent in migraine and TAC, making it an indicative marker for TTH.

Headache timing also varied by type, with TTH peaking in the afternoon/evening, migraine in the morning, and TAC showing highly variable timing.

The study found that headache characteristics were strongly suggestive of type: TTH was typically described as pressing, pressure-like or band-like; migraine as throbbing and pulsating, and TAC as severe sharp or lancinating kind of pain.

Migraine episodes were found to have the longest mean duration (8.4 hours), followed by TTH (7.5 hours) and TAC (1.26 hours). TAC also had the highest frequency of headache episodes, with a mean of 19.44 per month, compared to 12.90 for TTH and 11.06 for migraine.

The study observed distinct headache triggers: physical or emotional stress was the primary trigger for TTH, while fasting, sleep deprivation, intense auditory and olfactory stimuli, sunlight, weather changes etc. were common triggers for migraine. TAC was most often triggered by alcohol.

TTH was mostly unaccompanied by associated symptoms like nausea or photophobia,

while migraine frequently included these symptoms. TAC showed a mixed pattern. Autonomic symptoms, such as lacrimation and redness, were reported in 88.9% of TAC patients, whereas these were reported less frequently with migraine, none of the patients with TTH had autonomic symptoms.

Pain severity was highest in TAC, followed by migraine and TTH.

Aura was exclusively associated with migraine, occurring in 5.8% of patients, further emphasizing its diagnostic significance.

Most migraine patients experienced moderate to severe disability based on the MIDAS grading system, with 69.2% falling into Grades II to IV, indicating a substantial impact on daily functioning.

The study also highlights the challenges of managing headaches with longer durations and their impact on quality of life.

Sensitization to external stimuli like allodynia was mostly observed in migraineurs in the form of scalp pain during combing of hairs, though it was statistically insignificant.

TTH patients were found to have the highest anxiety levels compared to those with migraine or TAC. However, there were no significant differences in depression severity across headache types, with similar PHQ scores for all groups. TTH patients were also found to experience higher levels of stress compared to migraine and TAC patients on PSS scale, indicating a possible association between stress and headache type.

Variable presentations are extremely common in primary headache cases, so taking a holistic approach that considers all clinical characteristics along with demographic factors is a prudent choice for making an accurate diagnosis.

**Recommendations for this study:**

- ) **Establish Dedicated Headache OPDs:** Create specialized outpatient departments (OPDs) for headache patients, offering focused diagnosis, treatment, and management of headache disorders.
- ) **Enhance Public Awareness:** Implement educational campaigns to raise awareness about headache causes, triggers, and treatment options, empowering patients to seek timely care.
- ) **Integrate Wellness Centers for Lifestyle Management:** Collaborate with wellness centers to address lifestyle factors such as stress, diet, and sleep patterns, which are crucial in managing chronic headaches.
- ) **Develop Patient-Centric Treatment Guidelines:** Formulate comprehensive, individualized treatment protocols by integrating medical, lifestyle, and wellness approaches to effectively manage and prevent headaches.

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Appendix I (Ethical Certificate)

**MAHARANI LAXMI BAI MEDICAL COLLEGE, JHANSI - 284128**  
**Institute Ethics Committee (Human Studies)**

Certificate No. IEC/I/2023-2024 Date .....

**CERTIFICATE**

This is to certify that the project entitled "TO STUDY CLINICAL PROFILE OF PATIENTS WITH PRIMARY HEADACHE IN TERTIARY CARE CENTRE" Submitted by DR. NAVODIT TIWARI Department of GENERAL MEDICINE has been approved by the Institute Ethics Committee (Human Studies), at the meeting held on 06-05-2023 under the following terms and conditions.

- This approval is valid for two years for publication.
- Any serious adverse event occurring during the course of the study should be reported to the IEC within a period of seven days.
- Any mortality should be reported within 24 hours.
- A six monthly progress report of the project has to be submitted to the IEC for review.
- Any change in the study procedure/sire/investigator should be informed to the IEC.
- Under no condition any financial grant direct or indirect would be accepted from any pharmaceutical company.

**Member Secretary**  
**Institute Ethics Committee (Human Studies)**  
**M.L.B. Medical College, Jhansi**

To  
The Principal Investigator/  
Co-investigators

*Appendix II (Consent Form)*

**Participant's**

**Name.....Address:.....**

**Title of the project:**

**TO STUDY CLINICAL PROFILE OF PATIENTS WITH PRIMARY HEADACHE IN TERTIARY CARE CENTRE**

The details of the study have been provided to me in writing and explained to me in my own language. I confirm that I have understood the above study and had the opportunity to ask questions. I understand that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without the medical care that will normally be provided by the hospital being affected. I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purpose(s). I have been given an information sheet giving details of the study. I fully consent to participate in the above study.

**Signature of the Participant: .....**

**Date: .....**

**Signature of the Witness: .....**

**Date: .....**

*Appendix II (Consent Form)*

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**TO STUDY CLINICAL PROFILE OF PATIENTS WITH PRIMARY HEADACHE IN TERTIARY CARE CENTRE**

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*Appendix III (Working Proforma)*

- UHID/IP Number \_\_\_\_\_
- Patient's name \_\_\_\_\_
- Age (in years) \_\_\_\_\_
- Sex
  - Male ( )
  - Female ( )
  - Other \_\_\_\_\_
- Address
- Habitat Rural ( ) Urban ( )
- Marital Status Married ( ) Unmarried ( )
- Occupation:
  - House-wife ( )
  - Labourer ( )
  - Shopkeeper ( )
  - Farmer ( )
  - Businessman ( )
  - Student ( )
  - Driver ( )
  - Doctor ( )
  - Other \_\_\_\_\_
- Socioeconomic class:
  - Upper Class (Rs. 8220/month and above) ( )
  - Upper Middle Class (Rs. 4110/month to Rs. 8219/month) ( )
  - Middle Class (Rs. 2465/month to Rs. 4109/month) ( )
  - Lower Middle Class (Rs. 1230/month to Rs. 2464/month) ( )
  - Lower Class (Less than Rs. 1230/month) ( )

- History of any psychiatric condition:
- Joint family/ Nuclear family/ living alone:
- Menstrual history:
  - Normal ( )
  - Abnormal ( )
- Associated conditions: -
  - Hypertension
  - Diabetes mellitus
  - Hypothyroidism
  - Any other
- Duration of illness (how many months/years patient is affected by headache or facial pain disorder):  
Remembering the exact onset: yes/no  
If yes
  - Circumstances:
  - Exact date:
  - Exact month
  - Exact year:

**Headache /facial pain characteristics**

Usual time of headache/pain occurrence:

(morning/ afternoon/ evening/ night/ awakens from the sleep (mention time of awakening)/any other (specify):

**Location and distribution:**

- Strictly unilateral
- Starts one side of head then becomes holocranial
- Holocranial
- Sometimes hemicranial, sometimes holocranial
- Predominantly pain in face area
- Predominant area affected
  - Frontal
  - Temporal

- Parietal
- Occipital
- Vertex
- Peri-orbital/orbital/retro-orbital
- Maxillary
- Mandibular
- Any other
  - Linear pattern
- Location =
  - Coin shaped
- Location =
- Pain spread to neck/ shoulder region
- Pain moves from one location to other
- Any other Character of pain:
  - Throbbing
  - Pulsating
  - Pressure
  - Heaviness
  - Band like
  - Burning
  - Sharp shooting
  - Lancinating
  - Piercing
  - Stabbing
  - Thunderclap/high intensity/worst headache

**Duration of pain episode** (in seconds/minutes/hours/days)

(If in days, also calculate in hours):

**Headache frequency:**

- headache days/ month:
- if daily headache: (daily since onset/ progressed from lesser frequency)

**Triggers (precipitating factors):**

- Stress/psychological upset:
  - Headache occurring during stress/ after the stressful event has passed
    - If headache occurring after stressful event has passed, how many hours later headache happens? = ..... hours
- Auditory/Noise/sounds:
- Fatigue:
- Fasting/missing a meal:
- Hormonal:
  - Pre-menstrual period:
  - During menstruation period:
- Sleep:
  - Sleep deprivation/disturbed sleep:
  - Headache occurring during sleep and awakens the patient:
    - If yes, time of awakening:
    - Any change in character
- Weather
  - Weather change
  - Cold
  - Hot
- Visual
  - Bright light/glare
  - Flickering light
  - Contrasting patterns (road stripes)
- Olfactory
  - Perfumes
  - Nail polish
  - Paint
  - Petrol/diesel/gasoline
  - Cleaning products
- Alcohol
- Coughing
- Straining
- Valsalva manoeuvre

- Exercise
- Sexual activity
- External application of cold stimulus (e.g. applying ice)/ Ingestion of cold substance (e.g. drinking cold water)/ Inhalation of cold air
- External pressure/ compression (e.g. tight band around head/ hat/ helmet/ goggles worn during swimming)
- External pressure/sustained traction (e.g. tight ponytail)
- Any other

**Pain severity scale (0-10)** (average severity of most bothersome headaches):

**Associated features**

- Nausea
- Vomiting
- Photophobia (feels better in dark room)
- Phonophobia (feels better in quiet room)
- Vertigo/dizziness
- if present
  - duration:
    - during headache/not related to headache
- Palinopsia (persistence of images after the removal of stimulus)
- Worsening with physical activity/work
- Worsening with mental stress

**Autonomic symptoms**

- Lacrimation                      Unilateral/ bilateral (with symmetry/asymmetry)
- Redness of eyes                  Unilateral/ bilateral (with symmetry/asymmetry)
- Ptosis                                Unilateral/ bilateral (with symmetry/asymmetry)
- Miosis                                Unilateral/ bilateral (with symmetry/asymmetry)
- Any other



### Severity of autonomic and migrainous symptoms

Clinical features	Mild	Moderate	Severe
<b>Autonomic symptoms</b>			
- Lacrimation	Not requiring wiping	Requiring intermittent wiping	Necessitating frequent wiping
- Redness	In one quadrant	In 2-4 quadrants (but not severe)	Marked congestion/bilateral (with asymmetry)
- Nasal discharge	Mild and occasional	Moderate and noticeable	Severe to warrant medications/measures ,Affecting work
<b>Migrainous symptoms</b>			
- Photophobia	Only in bright light	In daylight	In dim light/no light
- Phonophobia	Only with loud noise (horns, heavy traffic)	With ambient sound (someone talking)	Bothered by noises in the next room

### Questionnaire for Aura (visual=1-8, somatosensory=9-12, dysphagic=13-19)

1. Flashes of bright light in the visual field?
2. Blurred spot in the visual field?
3. Scotoma (a partial loss of vision)?
4. Twinkling zig-zag lines in the visual field?
5. Tunnel vision (narrowing of the visual field)?
6. Deformed or distorted images, unrelated to the disturbance of vision?
7. Difficulties in recognizing faces, unrelated to the disturbance of vision?
8. Objects become bigger or smaller?
9. Tingling or numbness in hand, leg, and face (head)?
10. Difficulties in recognizing objects by touch?
11. Difficulties in activities requiring coordination and movement of extremities?
12. Unawareness of one part of your body?
13. Difficulties in recalling names?
14. Difficulties in recalling or remembering events from the past?
15. Difficulties in speaking even when you knew what you wanted to say?
16. Difficulties in understanding people who were talking to you?
17. Difficulties in reading comprehension, unrelated to visual disorders?
18. Difficulties in writing that were not caused by the disturbance of vision?
19. Difficulties in calculating and/or memorizing numbers?

- If visual aura present, please report the level of involvement of the visual field:
  - a quarter/ half /the whole of the visual field
  - duration of visual aura:
- If somatosensory aura present, please report
  - the number of body regions that were involved:
    - upper limb
    - head
    - trunk
    - lower limb
  - duration of somatosensory aura:
- If dysphagic aura present, please mention duration of dysphagic aura:

#### Visual aura rating scale:

Visual symptom characteristic	Risk score
Duration of visual symptom of 5 to 60 minutes	3
Visual symptom develops gradually over $\geq 5$ minutes	2
Scotoma symptom	2
Zig-zag line (fortification)	2
Unilateral (homonymous)	1
Migraine with aura diagnosis	Summed score $\geq 5$

## The Migraine Disability Assessment (MIDAS) Test

1. विगत तीन माह में सिरदर्द के कारण आप अपने कार्य या विद्यालय से कितने दिन अनुपस्थित रहे?  दिन
  2. विगत तीन माह में सिरदर्द के कारण कितने दिन आपकी कार्य-समता कार्य पर अथवा विद्यालय में आधी या उससे अधिक घट गई है? कृपया उन दिनों को सम्मिलित न करें जो अपने प्रश्न 1 में शामिल किया है जहाँ आप विद्यालय अथवा कार्य से अनुपस्थित रहें।  दिन
  3. विगत तीन माह में कितने दिन आपने सिरदर्द के कारण गृहकार्य नहीं किए?  दिन
  4. विगत तीन माह में कितने दिन आपके गृहकार्य करने की समता सिरदर्द के कारण आधी या उससे अधिक घट गयी है? कृपया प्रश्न 3 के अन्तर्गत सम्मिलित दिनों को शामिल न करें जिसमें आपने गृह कार्य नहीं किया है।  दिन
  5. विगत तीन माह में कितने दिन सिरदर्द के कारण आप पारिवारिक, सामाजिक अथवा मनोरंजन के किये कलायों को नहीं कर पाए।  दिन
- आपका गानक कुल योग

1. On how many days in the last 3 months did you miss work or school because of your headaches? = Days
2. How many days in the last 3 months was your productivity at work or school reduced by half or more because of your headaches? (Do not include days you counted in question 1 where you missed work or school.) = Days
3. On how many days in the last 3 months did you not do household work (such as housework, home repairs and maintenance, shopping, caring for children and relatives because of your headaches? = Days
4. How many days in the last 3 months was your productivity in household work reduced by half or more because of your headaches? (Do not include days you counted in question 3 where you did not do household work.) = Days
5. On how many days in the last 3 months did you miss family, social or leisure activities because of your headaches? = Days

**Total MIDAS score** (Questions 1-5) = .....

- A. On how many days in the last 3 months did you have a headache? (If a headache lasted more than 1 day, count each day.) =
- B. On a scale of 0 - 10, on average how painful were these headaches? (Pain severity score) (where 0=no pain at all, and 10= pain as bad as it can be.) =

Scoring: Add the total number of days from questions 1-5 (ignore A and B)

### Allodynia Symptom Checklist (ASC-12)

Question: <b>How often do you experience increased pain or an unpleasant sensation on your skin during your most severe type of headache when you engage each of the following?</b>	Does not apply to me	Never	Rarely	Less than half of the time	Half of the time or more
	score: 0	score: 0	score: 0	score: 1	score: 2
wearing a necklace					
wearing earrings					
wearing glasses					
wearing tight clothes					
wearing a pony tail					
wearing contact lenses					
shaving the face					
taking a shower					
combing the hair					
resting the head on a pillow					
exposure to cold					
exposure to heat					
Total score:					
Sum of score:					

Allodynia	ASC range
None	0-2
Mild	3-5
Moderate	6-8
Severe	9 or more

### GAD-2 screening tool for anxiety

Over the last two weeks, how often have you been bothered by the following?  (Use ✓ to indicate your answer)	Not at all	Several days	More than half of the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
Total				

If GAD 2 score > 3, then also do GAD-7 (it suggests significant anxiety symptoms)

### GAD-7 for anxiety assessment

Over the last two weeks, how often have you been bothered by the following?  (Use ✓ to indicate your answer)	Not at all	Several days	More than half of the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things?	0	1	2	3
4. Trouble relaxing?	0	1	2	3
5. Being so restless that it is hard to sit still?	0	1	2	3
6. Becoming easily annoyed or irritable?	0	1	2	3
7. Feeling afraid as if something awful might happen?	0	1	2	3
Total				
Overall total score (out of 21)				

### PHQ-2 screening tool for depression

Over the last two weeks, how often have you been bothered by the following?  (Use ✓ to indicate your answer)	Not at all	Several days	More than half of the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
Total				

If PHQ 2 score > 3, then do PHQ-9 (it suggests significant depressive symptoms)

### PHQ-9 for depression assessment

Over the last two weeks, how often have you been bothered by the following?  (Use ✓ to indicate your answer)	Not at all	Several days	More than half of the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0			
4. Feeling tired or having little energy	0			
5. Poor appetite or overeating	0			
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0			
7. Trouble concentrating on things, such as reading the newspaper or watching television	0			
8. Moving or speaking so slowly that other people could have noticed; or the opposite—being so fidgety or restless that you have been moving around a lot more than usual				
9. Thoughts that you would be better off dead or of hurting yourself in some way				
Total				
Overall total score (out of 27)				

### PSS (Perceived Stress Scale)

For each question choose from the following alternatives: 0 - never 1 - almost never 2 - sometimes 3 - fairly often 4 - very often	
1. In the last month, how often have you been upset because of something that happened unexpectedly?	
2. In the last month, how often have you felt that you were unable to control the important things in your life?	
3. In the last month, how often have you felt nervous and stressed?	
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	
5. In the last month, how often have you felt that things were going your way?	
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	
7. In the last month, how often have you been able to control irritations in your life?	
8. In the last month, how often have you felt that you were on top of things?	
9. In the last month, how often have you been angered because of things that happened that were outside of your control?	
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	

#### Calculation of PSS score

First, reverse your scores for questions 4, 5, 7, and 8. On these 4 questions, change the scores like this:

0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.

Then add up all scores

- Scores ranging from 0-13 would be considered low stress.
- Scores ranging from 14-26 would be considered moderate stress.
- Scores ranging from 27-40 would be considered high perceived stress.

- Cranial nerves \_\_\_\_\_
- Cranial nerve involved \_\_\_\_\_
- Motor System
  - Normal ( )
  - Hemiparesis ( )
- Reflexes:
  - Normal ( )
  - Abnormal ( )



**Appendix IV (Master Chart)**

SL No	Name	Age (Years)	Age	Gender	Residence	Marital Status	Family Structure	Socioeconomic	Occupation	Hypertension	Diabetes	Thyroid Disorder	Coronary Artery Disease	Stroke	Epilepsy	Duration of Illness (Years)	Location of Headache	Facial Pain	Neck Pain	Timing of Headache	Character of Headache	Duration of Headache (Hours)	Frequency of Headache (Episodes/Month)	Triggers	Pain Severity Scale	Associated Features	Autonomic Symptoms	Aura	Diagnosis	Type of Trigeminal Autonomic Cephalalgia	Migraine Disability Assessment	Alodynia Symptom Checklist-12	Generalised Anxiety Disorder	Patient Health Questionnaire	Perceived Stress Scale	Perceived Stress Scale Category
1	Rukmani	48	3	2	1	1	0	4	2	0	0	0	0	0	0	6	3	0	0	5	2	8	10	1,3,4,6	6	1,3,4	0	0	2		50	0	2	0	11	1
2	Rajni	32	2	2	1	1	0	4	2	0	0	0	0	0	0	2	2	0	0	1	1	10	16	0	6	0	0	0	1			2	1	15	2	
3	Himanshi	18	1	2	1	0	1	3	1	0	0	0	0	0	0	1.5	3	0	0	5	3	8	10	1,3,4,6	7	1,2,3	0	0	2		90	0	2	2	12	1
4	Pankaj	41	3	1	1	1	0	2	4	0	0	0	0	0	0	3	6	0	0	5	5	4	20	0	5	0	0	0	1			2	0	14	2	
5	Sunita	24	1	2	1	0	1	3	1	0	0	0	0	0	0	1.5	6	0	0	5	2	12	15	0,2,4	5	0	0	0	2		40	0	2	0	18	2
6	Shama Bano	27	1	2	1	1	0	2	2	0	0	0	0	0	0	1	6	0	0	1	1	10	10	0	5	0	0	0	1			2	2	18	2	
7	Vimla Devi	50	3	2	1	0	0	1	2	0	0	0	0	0	0	4	3	0	0	2	5	18	10	0,4	6	1,2	0	0	2		20	0	3	0	13	1
8	Divya	22	1	2	1	1	0	2	1	0	0	0	0	0	0	2	3	0	0	5	3	24	20	1,3,4,6	6	1,2,3	0	0	2		90	2	2	2	15	2
9	Prashant	20	1	1	1	0	0	2	1	0	0	0	0	0	0	1	1	0	0	5	2	12	10	1,4,6	6	1,2,3	0	0	2		60	0	1	1	12	1
10	Phool Kumari	60	4	2	1	1	0	1	2	0	0	0	0	0	0	2	1	0	1	2	4	6	14	0	4	0	0	0	1			1	1	20	2	
11	Kajal	30	1	2	1	1	1	2	2	0	0	0	0	0	0	2	6	0	0	5	1	3	10	0,2,4	6	2,3	0	0	2		30	0	2	2	15	2
12	Gayatri	35	2	2	1	1	0	2	2	0	0	0	0	0	0	1	6	0	0	5	2	4	12	0,4	6	1,2	0	0	2		20	0	1	0	13	1
13	Sakshi	23	1	2	0	0	0	2	1	0	0	0	0	0	0	6	2	0	0	5	1	12	15	0,1,6	7	1,2,3	1	0	2		45	3	3	2	13	1
14	Mamta Singh	57	4	2	1	1	0	0	2	0	0	0	0	0	0	0.25	6	0	0	5	2	20	12	3,4,6,7	8	1,2,3,4	0	0	2		40	0	2	2	10	1
15	Juhi	23	1	2	1	0	1	2	8	0	0	0	0	0	0	0.5	3	0	0	1	3	3	5	0,1,6	6	1,2,3	1	0	2		21	0	2	2	13	1
16	Anita Devi	50	3	2	1	1	1	1	2	0	0	0	0	0	0	2	2	0	0	1	3	2	10	0	7	1,2	0	0	2		20	0	2	2	14	2
17	Geeta Devi	34	2	2	1	1	0	1	2	0	0	0	0	0	0	0.3	6	0	0	5	2	4	10	1,4,6	6	1,2	0	0	2		20	0	2	2	13	1
18	Lad Kunwar	29	1	2	0	1	0	2	2	0	0	0	0	0	0	3	6	0	0	1	5	20	14	0	7	0	0	0	1			2	2	16	2	
19	Shivkranti	37	2	2	1	1	1	3	2	0	0	0	0	0	0	15	6	0	0	3	2	10	10	0,1,4,6	6	1,2,3	0	0	2		75	4	3	3	17	2
20	Priyanka Sahu	27	1	2	1	1	0	2	2	0	0	0	0	0	0	2	1	0	0	3	3	8	20	0,1	8	1,2,3,4	0	0	2		60	0	3	3	14	2

21	Archana	36	2	2	0	1	0	2	2	0	0	0	0	0	0.3	3	0	0	5	1	3	10	1,3,4,5,6,7	6	1	1	0	2		45	1	3	2	13	1	
22	Rubeena	25	1	2	1	1	1	3	2	0	0	0	0	0	2	1	0	0	5	5	1	5	1,6,7	8	1,2,3	0	0	2		10	4	6	4	21	2	
23	Vittan Yadav	35	2	1	0	1	0	2	4	0	0	0	0	0	3	6	0	1	1	1	4	5	0	7	0	0	0	1				2	2	20	2	
24	Abhishek	18	1	1	1	0	1	2	1	0	0	0	0	0	2	6	0	0	3	2	6	8	0,2	7	1	0	0	2		8	0	2	2	13	1	
25	Ankit	26	1	1	0	0	0	3	1	0	0	0	0	0	4	2	1	0	5	5	5	10	0,1,3	6	1,2	0	0	2		30	0	2	2	12	1	
26	Santoshi	24	1	2	0	0	0	3	1	0	0	0	0	0	5	2	0	0	2	1	4	10	0	7	0	0	0	1				5	5	19	2	
27	Vishal	27	1	1	1	0	0	2	8	0	0	0	0	0	2	1	0	0	1	4	5	12	0	6	1	0	0	1				2	2	16	2	
28	Jamna	43	3	2	0	1	0	3	2	0	0	0	0	0	5	6	0	0	5	3	8	5	0,1,2	7	1,2	0	0	2		40	0	2	2	13	1	
29	Priyanka	31	2	2	1	1	0	2	2	0	0	0	0	0	2	1	1	0	2	4	5	10	0	6	0	0	0	1				4	4	17	2	
30	Suman	43	3	2	1	1	0	2	2	0	0	0	0	0	3	2	0	0	5	2	8	10	0,2,3	7	1,2	0	0	2		50	0	2	2	13	1	
31	Bhuri	27	1	2	1	1	0	3	2	0	0	0	0	0	2	6	0	0	5	1	2	15	0	8	1	0	0	1				4	3	26	2	
32	Saroj	32	2	2	1	1	0	2	2	0	0	0	0	0	0.5	4	0	0	5	7	4	10	4	5	0	0	0	1				0	0	6	1	
33	Kirti	20	1	2	1	1	1	3	2	0	0	0	0	0	0.5	1	0	0	5	1	3	30	0	7	0	0	0	1				6	2	19	2	
34	Mahendra	52	4	1	1	1	0	2	4	0	0	0	0	0	1	5	1	0	5	2	0.5	20	3,11	8	1	1,2	0	3	1				2	2	13	1
35	Vimla Kumari	50	3	2	0	1	0	3	2	0	0	0	0	0	3	6	0	0	3	3	8	20	0,1,2,3	6	1,2	0	1	2		70	0	2	2	14	2	
36	Shahroz Khan	22	1	1	1	0	1	2	1	0	0	0	0	0	2	5	1	0	5	2	6	25	0,3	7	1	1,2	0	3	1				2	2	12	1
37	Jyoti Devi	36	2	2	0	1	0	2	2	0	0	0	0	0	1	1	0	0	5	1	10	10	1,2	6	1	0	0	2		60	0	2	2	13	1	
38	Sunita Kashyap	24	1	2	1	0	1	2	1	0	0	0	0	0	2	6	0	0	1	4	6	15	0	6	0	0	0	1				2	2	15	2	
39	Pankaj Bharti	41	3	1	1	1	0	3	5	0	0	0	0	0	6	2	0	0	2	5	8	10	0,2,3	6	0	0	0	2		30	0	2	2	12	1	
40	Lokendra	34	2	1	0	1	1	2	7	0	0	0	0	0	3	1	0	0	1	1	5	5	0	6	0	0	0	1				4	4	17	2	
41	Gurbani	33	2	2	0	1	1	2	2	0	0	0	0	0	3	6	0	0	3	3	8	12	1,3	6	1,2	1	1	2		60	0	2	2	14	2	
42	Varsha	21	1	2	1	0	0	2	1	0	0	0	0	0	2	2	0	0	3	2	10	15	0,1,3	7	2,3	0	0	2		70	0	3	3	15	2	
43	Rachna	35	2	2	0	1	1	3	2	0	0	0	0	0	5	6	0	0	2	4	12	15	0	7	0	0	0	1				2	2	14	2	
44	Sajiya	33	2	2	1	1	1	3	2	0	0	0	0	0	6	1	0	0	5	3	8	10	1,2	6	1,2	0	0	2		30	0	2	2	13	1	
45	Sangeeta	27	1	2	1	0	0	2	1	0	0	0	0	0	8	6	0	0	5	2	6	10	0,1	6	1	0	0	2		20	0	2	2	12	1	
46	Neeraj	29	1	1	0	0	1	3	3	0	0	0	0	0	3	2	0	0	1	3	8	15	1,5	7	2	0	0	2		30	0	2	2	13	1	
47	Neha	25	1	2	1	0	0	2	1	0	0	0	0	0	1	6	0	1	1	4	5	12	0	6	0	0	0	1				2	2	11	1	
48	Jaya Jain	22	1	2	1	0	0	1	1	0	0	0	0	0	2	6	0	0	2	1	6	10	0	7	0	0	0	1				2	2	12	1	
49	Pushpa	30	1	2	0	1	1	2	2	0	0	0	0	0	1	3	0	0	3	3	8	15	1,2	6	2,3	0	0	2		30	4	4	4	18	2	
50	Sushant	41	3	1	1	1	0	2	4	0	0	0	0	0	8	2	0	0	5	3	10	10	0,1,4	7	1,2	0	0	2		40	0	2	2	13	1	
51	Prem Yadav	43	3	1	0	1	1	3	9	0	0	0	0	0	0.25	3	0	0	5	1	12	30	0,4	6	0	0	0	1				0	0	8	1	
52	Amarchand	36	2	1	0	1	0	3	5	0	0	0	0	0	1	1	0	0	3	5	3	15	0	5	1	0	0	1				0	0	10	1	
53	Rukhsar	30	1	2	0	1	0	3	5	0	0	0	0	0	1	6	0	0	5	3	12	20	0,1,4,5,6	6	2,4	1,2	0	2		20	0	0	0	12	1	
54	Laxmi	50	3	2	0	1	0	4	3	0	0	0	0	0	0.25	6	0	0	5	5	12	20	0	6	0	0	0	1				0	0	6	1	
55	Saviya	60	4	2	1	1	0	2	7	0	0	0	0	0	10	1	0	0	5	3	10	30	0	8	0	0	0	1				0	0	8	1	
56	Parsuram	70	5	1	0	1	1	2	7	0	0	0	0	0	0.5	2	0	0	5	3	20	30	0	3	0	0	0	1				0	0	10	1	

57	Jyoti Devi	36	2	2	1	1	1	2	2	0	0	0	0	0	0.8	1	0	1	3	5	0.5	30	4.6	7	0	0	0	1				0	0	6	1	
58	Seeta	48	3	2	1	1	1	2	2	0	0	0	0	0	0.8	4	0	1	5	1	2	25	0	9	0	0	0	1				2	0	8	1	
59	Sejal Verma	18	1	2	1	0	1	2	7	0	0	0	0	0	0.5	6	0	0	4	2	24	3	0	7	1,2,3	1.2	0	2		22	6	3	3	29	3	
60	Geeta	62	5	2	0	1	0	1	2	0	0	0	0	0	0.2	6	0	0	5	1	2	30	0	6	1	0	0	1				2	2	16	2	
61	Amit Kumar	23	1	1	1	0	1	1	4	0	0	0	0	0	1	6	0	0	5	4	2	10	0	7	0	0	0	1				3	2	26	2	
62	Purti	41	3	2	1	1	0	1	2	0	0	0	0	0	0.4	6	0	1	5	6	2	8	0	5	1	0	0	1				2	2	17	2	
63	Priyanka	25	1	2	1	1	0	1	2	0	0	0	0	0	0.5	6	0	0	2	1	1	3	0	6	0	0	0	1				2	2	14	2	
64	Rajiv	30	1	1	1	1	0	2	9	0	0	0	0	0	6	4	0	0	2	6	5	3	0	6	0	0	0	1				0	0	8	1	
65	Santoshi	38	2	2	1	1	0	1	2	0	0	0	0	0	8	6	0	1	5	5	0.5	30	0	6	0	0	0	1				0	0	16	2	
66	Sabana	40	2	2	0	1	0	2	2	0	0	0	0	0	5	2	0	0	3	2	4	15	0,1,3	6	1.4	0	0	2		12	0	2	2	13	1	
67	Atar Singh	44	3	1	1	1	0	2	4	0	0	0	0	0	5	5	1	0	5	2	0.5	20	11	7	0	1.2	0	3	1				0	0	10	1
68	Ritik	19	1	1	1	0	1	1	1	0	0	0	0	0	2	6	0	0	1	3	3	10	0	6	0	0	0	1				2	2	13	1	
69	Sunita Ahirwar	31	2	2	0	1	0	3	2	0	0	0	0	0	1	2	0	0	3	3	5	12	2.3	7	2.3	0	0	2		12	0	2	2	11	1	
70	Vikas	41	3	1	1	1	0	2	9	0	0	0	0	0	0.5	1	0	0	5	4	4	15	0	5	0	0	0	1				2	2	13	1	
71	Sangeeta	44	3	1	1	1	0	2	2	0	0	0	0	0	1	2	0	0	2	5	5	20	0	6	1	0	0	1				0	0	7	1	
72	Richa	36	2	2	0	1	1	2	2	0	0	0	0	0	2	6	0	1	2	4	6	10	0	6	0	0	0	1				2	2	13	1	
73	Bali	51	4	1	1	1	0	2	4	0	0	0	0	0	5	6	0	0	5	1	8	15	0	7	0	0	0	1				2	2	12	1	
74	Nidhi	35	2	2	1	1	1	1	2	0	0	0	0	0	3	2	0	0	4	2	24	4	0,1	8	1.2	0	0	2		28	0	2	2	14	2	
75	Neelam	34	2	2	0	1	0	2	2	0	0	0	0	0	4	6	0	0	2	2	10	20	1	6	1,2,3	0	0	2		30	0	2	3	20	2	
76	Jaiton Bai	63	5	2	1	1	1	3	4	0	0	0	0	0	0.5	3	0	0	5	3	0.5	5	2.4	5	0	0	0	1				2	2	24	2	
77	Sukhnandan	37	2	1	0	1	0	3	5	0	0	0	0	0	6	6	0	0	5	5	0.25	10	0	5	0	0	0	1				0	0	16	2	
78	Mewa	35	2	2	1	1	0	2	3	0	0	0	0	0	0.25	2	0	1	3	5	2	15	0.4	5	0	0	0	1				2	0	22	2	
79	Bharat	60	4	1	0	1	0	0	3	0	0	0	0	0	0.3	6	0	0	4	5	2	5	0	4	0	0	0	1				0	0	25	2	
80	Anandi Lal	55	4	1	1	1	1	3	9	0	0	0	0	0	5	6	0	0	1	4	5	10	0	5	0	0	0	1				1	2	14	2	
81	Kamini	35	2	2	1	1	0	2	2	0	0	0	0	0	2	3	0	0	5	2	48	30	1,2,5	6	1,2,3	1	1	2		36	0	2	2	23	2	
82	Meena Raja	27	1	2	1	1	0	2	2	0	0	0	0	0	3	6	0	0	2	2	24	15	0	7	1	0	0	1				2	0	18	2	
83	Swati Parihar	23	1	2	1	0	0	3	1	0	0	0	0	0	3	2	0	0	4	3	24	10	0	8	1	0	0	1				2	2	24	2	
84	Pooja	19	1	2	0	0	1	3	1	0	0	0	0	0	3	6	0	0	2	2	12	15	0	7	0	0	0	1				2	2	18	2	
85	Vijay	36	2	1	1	1	1	3	5	0	0	0	0	0	2	6	0	1	2	5	48	20	0	6	1	0	0	1				2	0	28	3	
86	Yash	21	1	1	1	0	1	2	1	0	0	0	0	0	1	6	0	0	2	1	7	15	0	5	0	0	0	1				2	2	11	1	
87	Dropti	48	3	2	1	1	0	3	2	0	0	0	0	0	1	6	0	0	4	5	24	3	0	5	0	0	0	1				2	2	15	2	
88	Rekha	32	2	2	0	1	1	3	2	0	0	0	0	0	0.3	6	0	0	2	3	1	10	0	6	0	0	0	1				0	0	20	2	
89	Khushbu	25	1	2	1	1	1	4	4	0	0	0	0	0	7	2	0	0	3	6	24	20	0,1,4,6	7	1,2,3,4	0	0	2		34	0	2	2	22	2	
90	Rekha	30	1	2	1	1	0	2	2	0	0	0	0	0	5	2	0	0	5	2	24	30	0	6	1	0	0	1				2	2	26	2	
91	Divya	33	2	2	1	1	1	2	2	0	0	0	0	0	4	6	0	0	1	5	4	10	0	6	0	0	0	1				2	2	22	2	
92	Asha	43	3	2	0	1	0	2	2	0	0	0	0	0	2	6	0	1	5	1	4	15	0	5	0	0	0	1				0	0	12	1	

93	Bhavya	19	1	2	0	1	1	2	1	0	0	0	0	0	2	6	0	0	3	5	24	15	0	5	0	0	0	0	1					2	2	18	2
94	Nitu Jain	42	3	2	1	1	1	2	2	0	0	0	0	0	10	2	0	0	5	8	24	15	0	6	1	0	0	1					2	2	20	2	
95	Priyanka	38	2	2	1	1	0	2	2	0	0	0	0	0	2	2	0	1	2	2	24	20	0	7	0	0	0	1					2	2	24	2	
96	Prem Lata	38	2	2	0	1	1	2	4	0	0	0	0	0	0.25	6	1	0	5	2	6	15	0,1,5	6	1,4	1	0	2		20	0	2	2	25	2		
97	Raj Kumari	34	2	2	1	1	0	2	2	0	0	0	0	0	3	1	0	0	2	5	3	30	0	6	0	0	0	1					2	0	18	2	
98	Shyam Kumari	54	4	2	0	1	0	2	2	0	0	0	0	0	0.25	6	0	0	2	5	2	4	0	6	0	0	0	1					0	0	10	1	
99	Chanda	40	2	2	1	1	1	2	2	0	0	0	0	0	2	4	0	0	5	5	24	6	0	5	0	0	0	1					0	0	15	2	
100	Neha Verma	27	1	2	0	0	1	1	1	0	0	0	0	0	4	6	0	0	1	3	6	10	1,2	6	1	0	0	2		15	0	1	1	11	1		
101	Jayanti	40	2	2	1	1	0	2	2	0	0	0	0	0	5	2	0	0	5	1	5	12	0,3	6	2,4	0	0	2		16	0	2	2	13	1		
102	Sunita Sharma	35	2	2	1	1	0	2	2	0	0	0	0	0	1	1	0	0	2	4	8	10	0,2	6	0	0	0	1					1	1	10	1	
103	Pradeep Kumar	28	1	1	1	0	0	1	9	0	0	0	0	0	5	5	1	0	5	3	0,3	20	0	7	0	1,2	0	3	1					0	0	8	1
104	Ayush Kumar	24	1	1	0	0	1	2	1	0	0	0	0	0	2	1	0	0	3	5	2	15	0,2	6	1	0	0	2		12	0	1	1	10	1		
105	Damini	45	3	2	1	1	0	3	2	0	0	0	0	0	8	6	0	1	2	1	4	10	0	6	0	0	0	1					2	2	13	1	
106	Harish Sharma	35	2	1	0	1	0	2	9	0	0	0	0	0	5	2	0	0	5	3	5	10	0,3,4	6	1,2	0	0	2		25	0	2	2	14	2		
107	Pushpa Devi	38	2	2	0	1	1	1	2	0	0	0	0	0	3	2	0	0	2	4	6	12	0	6	0	0	0	1					2	2	13	1	
108	Amisha	22	1	2	1	0	0	2	1	0	0	0	0	0	2	6	0	0	1	1	4	10	0	7	0	0	0	1					0	0	10	1	
109	Akansha	23	1	2	1	0	1	1	1	0	0	0	0	0	5	1	0	0	3	2	8	20	3,4	7	1,4	0	0	2		30	0	1	1	10	1		
110	Bharat	29	1	1	0	1	0	3	3	0	0	0	0	0	4	6	0	0	5	1	6	15	0	6	0	0	0	1					2	2	13	1	
111	Gouri	24	1	2	1	0	1	2	1	0	0	0	0	0	4	1	0	0	4	3	5	10	0	6	0	0	0	1					3	3	16	2	
112	Nandini	27	1	2	1	0	0	1	1	0	0	0	0	0	6	1	0	0	3	2	6	12	0,2,4	6	1,2	1	0	2		26	0	5	5	18	2		
113	Muskan	20	1	2	1	0	0	1	1	0	0	0	0	0	2	6	0	0	3	3	4	8	1,3	6	3	0	0	2		8	0	1	1	10	1		
114	Noorafsha	37	2	2	0	1	0	3	2	0	0	0	0	0	5	6	0	0	2	4	6	15	0	7	0	0	0	1					2	2	13	1	
115	Pratibha	28	1	2	1	1	1	2	2	0	0	0	0	0	3	2	0	0	4	1	8	15	0,3,4,6	6	1	0	0	2		12	0	2	2	12	1		
116	Kiran	30	1	2	1	0	0	2	7	0	0	0	0	0	6	6	0	0	1	4	6	10	0	5	0	0	0	1					2	2	11	1	
117	Karishma	22	1	2	1	0	1	1	1	0	0	0	0	0	2	4	0	1	1	1	5	15	0	6	0	0	0	1					1	1	10	1	
118	Sudeep	39	2	1	0	1	0	3	3	0	0	0	0	0	5	6	0	0	2	5	6	10	0	5	0	0	0	1					5	5	17	2	
119	Vidushi	23	1	2	1	0	0	1	1	0	0	0	0	0	6	1	0	0	5	3	10	15	3,6	6	1,2	0	0	2		25	0	2	2	12	1		
120	Vineeta	25	1	2	1	0	1	2	1	0	0	0	0	0	5	6	0	0	5	5	5	12	2	7	0	0	0	1					2	2	13	1	
121	Shivangi	21	1	2	1	0	1	2	1	0	0	0	0	0	6	6	0	0	2	4	8	15	0	6	0	0	0	1					2	2	14	2	
122	Tanu	27	1	2	0	1	0	1	2	0	0	0	0	0	2	2	0	0	4	3	5	10	0,3	6	1	0	0	2		12	0	1	1	11	1		
123	Yash Verma	34	2	1	0	1	0	2	4	0	0	0	0	0	6	1	0	0	2	4	10	10	0	5	0	0	0	1					2	2	13	1	
124	Rahul	30	1	1	1	1	0	2	4	0	0	0	0	0	1	6	0	0	1	5	2	10	0	6	0	0	0	1					2	2	14	2	
125	Manu	23	1	2	1	0	1	1	1	0	0	0	0	0	2	1	0	0	3	2	6	5	3	6	0	0	0	2		5	0	1	1	9	1		
126	Niyati	25	1	2	0	0	0	2	1	0	0	0	0	0	4	2	0	0	4	2	5	10	1,3	7	2	0	0	2		10	0	2	2	12	1		
127	Sumaiya	42	3	2	1	1	0	2	2	0	0	0	0	0	8	4	0	1	1	5	6	15	0	5	0	0	0	1					4	4	14	2	
128	Ria Sonkar	19	1	2	1	0	1	1	1	0	0	0	0	0	2	1	0	0	3	2	4	8	1,3	6	0	0	0	2		9	0	2	2	11	1		

129	Vishakha	25	1	2	1	0	0	3	1	0	0	0	0	0	3	6	0	0	2	4	5	10	4	7	0	0	0	1				1	1	9	1
130	Rahul Ranjan	28	1	1	0	1	0	2	3	0	0	0	0	0	2	4	0	1	5	5	8	15	0	5	0	0	0	1				2	2	12	1
131	Sarthak Khanna	30	1	1	0	1	0	2	4	0	0	0	0	0	5	6	0	0	5	5	5	10	0	6	0	0	0	1				1	1	11	1
132	Sandeep	23	1	1	1	0	1	2	1	0	0	0	0	0	1	1	0	0	3	3	8	12	3,4	6	1	0	0	2		10	0	2	2	12	1
133	Siddarth	40	2	1	1	1	0	1	9	0	0	0	0	0	4	4	0	1	2	4	6	15	0	6	1	0	0	1				5	3	18	2
134	Priyanshi	36	2	2	0	1	1	2	2	0	0	0	0	0	6	6	0	0	2	1	5	10	0	6	0	0	0	1				2	1	13	1
135	Genda	42	3	2	0	1	1	2	2	0	0	0	0	0	12	2	1	0	4	2	8	8	2,3,4	7	1,2	0	0	2		16	0	2	1	12	1
136	Khushboo Devi	32	2	2	1	1	0	1	2	0	0	0	0	0	5	1	0	0	2	4	8	10	0	5	0	0	0	1				2	0	11	1
137	Jagriti	35	2	2	1	1	0	3	2	0	0	0	0	0	6	2	0	0	3	2	10	15	0,4,6	6	1,2	0	0	2		12	0	5	2	17	2
138	Dhriti Singh	29	1	2	1	1	0	2	1	0	0	0	0	0	4	1	0	0	5	3	12	12	1,3,6	6	1,2,3	0	0	2		14	0	2	0	12	1
139	Abhay	28	1	1	1	0	1	2	4	0	0	0	0	0	3	6	0	0	5	1	4	15	0	5	0	0	0	1				2	1	11	1
140	Kashish	22	1	2	0	0	1	3	1	0	0	0	0	0	2	2	0	0	5	3	8	10	1,2,3	6	2,3	0	0	2		10	0	2	0	13	1
141	Ujjwal	25	1	1	0	0	0	2	1	0	0	0	0	0	1	6	0	0	1	5	6	15	0	6	0	0	0	1				4	2	16	2
142	Manoj	45	3	1	1	1	0	2	4	0	0	0	0	0	5	6	0	0	2	5	6	5	0	6	0	0	0	1				2	2	13	1
143	Yashwant	31	2	1	1	1	0	1	9	0	0	0	0	0	3	1	0	0	1	2	5	10	0	7	0	0	0	1				2	2	12	1
144	Gumna	33	2	2	0	1	0	4	3	0	0	0	0	0	4	6	0	0	1	4	8	15	0	7	0	0	0	1				5	2	17	2
145	Chandan	35	2	1	1	1	1	2	4	0	0	0	0	0	7	2	0	0	3	3	6	10	0,3,4,6	6	1,2	0	0	2		15	0	2	2	12	1
146	Uma Devi	40	2	2	0	1	0	3	3	0	0	0	0	0	6	6	0	0	2	4	10	20	0	6	1	0	0	1				4	2	16	2
147	Krishna	26	1	1	1	0	1	2	1	0	0	0	0	0	2	2	0	0	5	1	4	8	0	5	0	0	0	1				2	2	13	1
148	Sameer	21	1	1	1	0	1	1	1	0	0	0	0	0	2	2	0	0	4	3	3	10	2,6	6	1	0	0	2		7	0	1	1	8	1
149	Kusum Devi	32	2	2	0	1	0	3	4	0	0	0	0	0	4	2	0	0	3	2	8	15	0,1,4,6	6	1,2	0	0	2		10	0	2	1	13	1
150	Ravi Sen	27	1	1	1	1	1	2	1	0	0	0	0	0	3	6	0	0	2	5	6	10	0	6	0	0	0	1				2	1	12	1
151	Arti Gupta	23	1	2	1	0	1	3	1	0	0	0	0	0	5	1	0	0	3	1	8	20	0,3,4,6	7	1,2	0	0	2		16	0	2	1	13	1
152	Abhimanyu	19	1	1	1	0	0	1	1	0	0	0	0	0	1	6	0	0	2	5	4	10	0	6	0	0	0	1				1	0	9	1
153	Kajal Mishra	24	1	2	1	0	1	2	1	0	0	0	0	0	2	6	0	1	1	5	5	12	0,3	6	0	0	0	1				2	0	12	1
154	Prema	20	1	2	1	0	0	1	1	0	0	0	0	0	1	1	0	0	3	3	6	10	0,1	6	1	0	0	2		5	0	1	0	9	1
155	Bharti	35	2	2	0	1	0	3	2	0	0	0	0	0	6	2	0	0	3	2	8	5	3,4,6	7	1,2,4	0	0	2		12	0	2	1	11	1
156	Reema	26	1	2	1	0	1	2	1	0	0	0	0	0	3	1	0	0	2	4	4	15	0,4	6	0	0	0	1				5	3	17	2
157	Sadiya	31	2	2	0	1	0	3	2	0	0	0	0	0	4	6	0	0	2	4	6	15	0	7	0	0	0	1				6	2	21	2
158	Prakash	33	2	1	0	1	0	3	3	0	0	0	0	0	2	6	0	0	1	1	8	10	0	5	0	0	0	1				4	1	15	2
159	Anuj	25	1	1	1	0	0	2	4	0	0	0	0	0	5	2	0	0	4	3	10	12	0,1,4	6	1,4	0	0	2		12	0	2	0	12	1
160	Asha Gupta	37	2	2	1	1	1	2	2	0	0	0	0	0	8	1	1	0	3	5	8	15	3,6,7	6	1,2	1	0	2		15	0	4	2	16	2
161	Hemlata	30	1	2	0	1	0	2	2	0	0	0	0	0	1	1	0	0	3	2	24	10	0	7	0	0	0	1				2	2	18	2
162	Prakash	58	4	1	1	1	1	3	4	0	0	0	0	0	4	4	1	0	2	5	24	30	0	6	0	0	0	1				0	0	12	1
163	Satyendra	22	1	1	1	0	1	1	1	0	0	0	0	0	3	3	0	0	3	1	12	10	0	6	0	0	0	1				0	0	15	2
164	Devendra	23	1	1	1	1	0	1	3	0	0	0	0	0	1	6	0	0	2	3	24	5	0	6	1	0	0	1				2	2	20	2

165	Mamta	50	3	2	0	1	0	1	3	0	0	0	0	0	5	4	0	1	1	2	10	10	0	5	0	0	0	1					2	0	12	1	
166	Noor Jahan	44	3	2	1	1	0	2	2	0	0	0	0	0	7	6	1	0	1	3	3	2	0	4	0	0	0	1					0	0	8	1	
167	Sandhya	21	1	2	1	0	0	3	1	0	0	0	0	0	2	2	0	0	1	3	1	15	0	5	0	0	0	1					0	0	12	1	
168	Sheela Kumari	55	4	2	0	1	1	3	9	0	0	0	0	0	25	6	0	1	5	5	4	15	0	6	1	0	0	1					2	0	18	2	
169	Narayan Das	61	5	1	1	1	0	2	6	0	0	0	0	0	2	5	1	0	3	8	1	30	4	5	1	2	0	3	1					2	0	20	2
170	Neetu	40	2	2	1	1	1	3	2	0	0	0	0	0	6	6	0	0	2	1	48	10	4	6	0	0	1	2		20	0	2	2	26	2		
171	Lali Devi	31	2	2	1	1	1	4	3	0	0	0	0	0	1	3	0	0	2	2	2	10	0	6	0	0	0	1					0	0	18	2	
172	Preeti Devi	32	2	2	1	1	1	3	2	0	0	0	0	0	10	6	0	0	5	3	48	15	0,2	6	0	0	0	1					2	2	22	2	
173	Neha	27	1	2	1	0	0	3	1	0	0	0	0	0	1	2	0	1	3	5	10	12	0	7	0	0	0	1					2	2	18	2	
174	Varsha	30	1	2	1	1	1	3	2	0	0	0	0	0	2	1	0	0	1	2	15	10	0	7	1	0	0	1					2	1	20	2	
175	Suman	37	2	2	1	1	0	3	2	0	0	0	0	0	2	6	0	0	3	1	5	10	0	7	0	0	0	1					2	0	16	2	
176	Rani	39	2	2	0	1	0	2	2	0	0	0	0	0	10	2	0	0	3	3	6	15	1,3,4	6	1	0	0	2		16	0	2	2	13	1		
177	Manju	50	3	2	0	1	0	2	2	0	0	0	0	0	5	2	0	0	2	4	8	12	0	6	0	0	0	1					2	1	11	1	
178	Rakhi Devi	25	1	2	1	0	1	2	1	0	0	0	0	0	4	6	0	0	2	1	5	10	0,4	5	0	0	0	1					1	1	9	1	
179	Zoya	27	1	2	1	1	0	3	2	0	0	0	0	0	6	2	0	0	4	2	10	10	1,4,6,7	6	1,2	0	0	2		15	0	2	2	14	2		
180	Deepti	41	3	2	1	1	0	2	2	0	0	0	0	0	6	2	0	0	1	4	5	15	0	6	0	0	0	1					2	0	12	1	
181	Kajal	20	1	2	1	0	1	1	1	0	0	0	0	0	1	6	0	0	1	4	6	20	0	6	0	0	0	1					4	1	15	2	
182	Neha	21	1	2	1	0	0	2	1	0	0	0	0	0	3	1	0	0	5	1	8	15	0	6	0	0	0	1					2	2	12	1	
183	Sanjeev	33	2	1	0	1	0	3	3	0	0	0	0	0	5	6	0	0	5	2	6	10	0,2,3,4	7	1,2	0	0	2		12	0	2	2	13	1		
184	Pooja	25	1	2	1	0	1	2	1	0	0	0	0	0	2	6	0	0	2	1	4	10	0	6	0	0	0	1					2	1	12	1	
185	Dayaram	49	3	1	0	1	0	3	3	0	0	0	0	0	8	5	1	0	5	3	0,5	10	0,2,11	6	0	1,2	0	3	2					2	2	13	1
186	Shashi Pal	33	2	2	0	1	0	2	2	0	0	0	0	0	5	4	0	0	3	3	4	8	0,2,3	6	1,4	0	0	2		9	0	1	0	11	1		
187	Aarti lal	25	1	2	1	0	1	1	1	0	0	0	0	0	2	2	0	0	1	4	8	15	0	6	0	0	0	1					0	0	13	1	
188	Archana Singh	35	2	2	1	1	0	2	2	0	0	0	0	0	5	1	0	0	3	1	10	12	2,4,6	6	1	0	0	2		13	0	2	1	12	1		
189	Ramshri	34	2	2	0	1	1	3	3	0	0	0	0	0	3	6	0	0	2	4	12	15	0	6	0	0	0	1					2	2	11	1	
190	Phoolwati	52	4	2	0	1	0	3	2	0	0	0	0	0	8	6	0	0	5	2	8	10	0	6	1	0	0	1					5	3	17	2	
191	Chhaya	22	1	2	1	0	0	2	1	0	0	0	0	0	6	1	0	1	2	4	6	10	0	7	0	0	0	1					3	0	12	1	
192	Vimla Singh	56	4	2	1	1	1	2	2	0	0	0	0	0	15	2	0	0	4	3	10	8	0,2,3,4,6	6	1,2	0	0	2		10	0	2	2	11	1		
193	Reshma	37	2	2	1	1	1	3	2	0	0	0	0	0	7	6	0	0	2	1	6	10	0	5	0	0	0	1					2	1	12	1	
194	Guddi	54	4	2	0	1	0	2	2	0	0	0	0	0	10	1	0	0	5	2	8	12	4,6	6	1,2	0	0	2		11	0	2	0	11	1		
195	Sonam	18	1	2	1	0	1	1	1	0	0	0	0	0	1	6	0	0	5	4	4	5	0	5	0	0	0	1					0	0	7	1	
196	Neelam Devi	37	2	2	1	1	0	2	2	0	0	0	0	0	4	6	0	0	3	2	6	10	0,1,3,6	6	1,2	0	0	2		13	0	2	1	11	1		
197	Dipti	22	1	2	1	1	1	2	1	0	0	0	0	0	2	2	0	0	1	1	8	10	0	6	0	0	0	1					1	0	8	1	
198	Shivani	24	1	2	0	0	0	2	1	0	0	0	0	0	1	6	0	0	1	4	5	15	0	6	0	0	0	1					2	0	13	1	
199	Vandana	32	2	2	0	1	0	3	2	0	0	0	0	0	5	1	0	0	5	2	8	12	0,1,2	6	1	0	0	2		8	0	2	1	12	1		
200	Adesh	21	1	1	1	0	1	1	1	0	0	0	0	0	2	6	0	0	5	4	6	10	0	6	0	0	0	1					2	1	11	1	

201	Rajni	18	1	2	1	0	0	2	1	0	0	0	0	0	2	6	0	0	5	1	6	8	0	6	0	0	0	1				0	0	7	1	
202	Babita	34	2	2	0	1	0	3	4	0	0	0	0	0	5	2	0	0	3	2	2	10	1,4	7	1	0	0	2		8	0	2	2	13	1	
203	Kanchan	18	1	2	1	0	1	1	1	0	0	0	0	0	1	6	0	0	1	1	5	20	1,3,6	6	1	0	0	2		8	0	1	0	9	1	
204	Naina	33	2	2	1	1	0	2	2	0	0	0	0	0	4	2	0	0	1	3	8	8	4,6	7	1,2	0	0	2		10	0	2	2	13	1	
205	Dolly Kumari	18	1	2	1	0	0	1	1	0	0	0	0	0	4	6	0	0	3	1	5	5	1,6	6	0	0	0	2		7	0	1	0	6	1	
206	Sumit Ahirwar	18	1	1	1	0	1	2	1	0	0	0	0	0	1	6	0	0	5	2	4	8	0,2	6	1,4	0	0	2		8	0	2	1	11	1	
207	Naseem Bano	28	1	2	0	1	0	3	2	0	0	0	0	0	2	1	0	0	2	2	6	10	3,6	7	1,2	0	0	2		9	0	2	0	10	1	
208	Sangeeta Singh	27	1	2	1	0	0	2	2	0	0	0	0	0	10	6	0	0	1	4	8	12	0	6	0	0	0	1				4	1	16	2	
209	Kumkum	24	1	2	1	0	0	2	1	0	0	0	0	0	3	1	0	1	1	1	5	20	0,3	6	0	0	0	1				2	1	13	1	
210	Mamta Verma	26	1	2	0	0	1	2	1	0	0	0	0	0	5	6	0	0	5	4	8	15	0	5	0	0	0	1				5	2	17	2	
211	Meera Verma	20	1	2	1	0	0	1	1	0	0	0	0	0	2	2	0	0	3	3	10	10	2,3,6	6	1,2	0	0	2		8	0	2	0	11	1	
212	Sarwan Kumar	25	1	2	0	0	1	2	3	0	0	0	0	0	5	6	0	0	1	1	6	10	0	7	0	0	0	1				2	1	10	1	
213	Golu Yadav	18	1	1	1	0	1	2	1	0	0	0	0	0	1	2	0	0	5	1	6	15	0	6	0	0	0	1				2	0	9	1	
214	Paras Gupta	50	3	1	1	1	0	1	6	0	0	0	0	0	8	5	1	0	5	3	0,5	10	0,2	6	1	1	0	3	2				2	1	10	1
215	Vidhya	30	1	2	1	1	0	2	2	0	0	0	0	0	3	1	0	0	3	1	6	5	0	6	1	0	0	1				2	0	9	1	
216	Prabha	42	3	2	0	1	0	2	2	0	0	0	0	0	10	2	0	0	4	2	8	10	2,3,4	7	1	0	0	2		12	0	2	1	10	1	
217	Shashank	29	1	1	1	0	0	1	1	0	0	0	0	0	5	6	0	0	1	1	6	5	0	5	0	0	0	1				1	0	6	1	
218	Pulkit	21	1	1	1	0	1	2	1	0	0	0	0	0	2	6	0	0	5	4	8	5	0	6	0	0	0	1				2	2	13	1	
219	Bhavna	33	2	2	1	1	0	1	2	0	0	0	0	0	6	1	0	0	5	2	12	15	0,6	6	1,2	0	0	2		9	0	4	1	15	2	
220	Ashok Kumar	45	3	1	1	1	1	3	4	0	0	0	0	0	3	6	0	0	2	1	5	10	0	7	0	0	0	1				4	2	16	2	
221	Divyangini	28	1	2	0	0	0	1	1	0	0	0	0	0	4	4	0	0	3	1	6	10	0,2,3	6	1,4	0	0	2		8	0	2	1	13	1	
222	Radhika	25	1	2	1	0	1	0	1	0	0	0	0	0	2	6	0	0	5	4	4	5	0	6	0	0	0	1				2	0	11	1	
223	Ayushi	27	1	2	1	0	0	0	1	0	0	0	0	0	1	6	0	0	1	4	3	8	0	6	0	0	0	1				2	0	13	1	
224	Sameeksha	26	1	2	0	0	1	2	1	0	0	0	0	0	5	2	1	0	4	3	8	12	2,4,6,7	7	1,2,3	0	0	2		19	0	2	1	12	1	
225	Nikita	24	1	2	1	0	0	2	1	0	0	0	0	0	2	6	0	0	5	1	6	10	0	6	0	0	0	1				1	0	10	1	
226	Ekta	22	1	2	1	0	1	2	1	0	0	0	0	0	1	2	0	0	5	3	8	10	3,6	6	1,2	0	0	2		7	0	0	0	8	1	
227	Meenu	35	2	2	0	1	0	3	3	0	0	0	0	0	4	6	0	0	1	4	10	15	0	6	1	0	0	1				5	1	16	2	
228	Ajay	31	2	1	0	1	1	2	3	0	0	0	0	0	3	2	0	0	3	3	6	10	0,4	5	0	0	0	2		6	0	2	1	13	1	
229	Pushpendra	19	1	1	1	0	0	1	1	0	0	0	0	0	1	1	0	0	3	1	4	5	3,4	6	1	0	0	2		5	0	1	0	9	1	
230	Deeksha	30	1	2	1	1	1	2	2	0	0	0	0	0	6	6	0	0	5	1	6	10	0	6	0	0	0	1				2	0	11	1	
231	Manjula	36	2	2	0	1	0	2	2	0	0	0	0	0	3	6	0	0	2	4	8	15	0	7	1	0	0	1				5	1	16	2	
232	Shailja	32	2	2	0	1	1	2	2	0	0	0	0	0	5	2	0	0	4	2	10	12	1,3,6	6	1,2,3	0	0	2		10	6	4	2	17	2	
233	Prem Devi	41	3	2	1	1	0	2	2	0	0	0	0	0	4	6	0	0	5	4	6	6	0	6	0	0	0	1				2	1	12	1	
234	Maya Anand	39	2	2	0	1	0	3	3	0	0	0	0	0	6	6	0	0	1	1	8	10	0	7	0	0	0	1				2	0	11	1	
235	Sukriti	27	1	2	1	0	1	0	1	0	0	0	0	0	3	2	0	0	3	2	5	5	3,4	6	1,2	0	0	2		8	0	2	1	12	1	
236	Vaibhav	28	1	1	1	0	1	0	1	0	0	0	0	0	5	6	0	0	5	1	6	10	0	7	0	0	0	1				2	1	13	1	

237	Avneesh	32	2	1	1	1	0	2	3	0	0	0	0	0	6	6	0	0	1	4	8	5	0	6	0	0	0	1				2	0	12	1
238	Saumya	26	1	2	1	0	1	1	1	0	0	0	0	0	4	2	0	0	3	2	6	10	1,2,3	6	1,2	0	0	2		10	0	2	1	11	1
239	Shaba	28	1	2	1	1	0	2	2	0	0	0	0	0	5	2	0	0	5	1	4	15	0	7	0	0	0	1				4	1	15	2
240	Shahista	33	2	2	0	1	0	3	2	0	0	0	0	0	8	2	1	0	4	2	8	10	1,3,6	6	1,2,3	0	0	2		9	0	2	0	13	1
241	Aakash	26	1	1	1	0	1	1	1	0	0	0	0	0	3	6	0	1	5	4	5	20	0	6	0	0	0	1				4	2	17	2
242	Aman	29	1	1	0	0	0	2	3	0	0	0	0	0	4	1	0	0	1	1	6	15	0	5	0	0	0	1				2	1	13	1
243	Charu	21	1	2	1	0	1	0	1	0	0	0	0	0	2	1	0	0	4	3	4	12	0,1,3,4	6	1,2	0	0	2		7	0	5	2	17	2
244	Manvi	28	1	2	1	0	1	1	1	0	0	0	0	0	5	6	0	0	2	4	6	10	0	6	0	0	0	1				2	1	12	1
245	Tej Pratap	38	2	2	0	1	0	2	3	0	0	0	0	0	3	2	0	0	3	2	5	10	1,2	6	1,2	0	0	2		8	0	2	0	11	1
246	Nalini	39	2	2	0	1	0	1	2	0	0	0	0	0	10	2	0	0	5	1	8	12	0,2,6	7	1,4	0	0	2		10	0	4	1	16	2
247	Shivam	31	2	1	1	1	1	2	4	0	0	0	0	0	5	6	0	0	1	5	5	6	0	5	0	0	0	1				1	0	9	1
248	Urmila	36	2	2	1	1	0	1	2	0	0	0	0	0	5	2	0	0	5	3	8	10	0,1,4,6	7	1,2	0	0	2		11	0	4	2	16	2
249	Neha	30	1	2	1	1	1	2	2	0	0	0	0	0	2	6	0	0	5	4	10	15	0	6	0	0	0	1				5	1	17	2
250	Vinayak	29	1	1	1	0	0	1	1	0	0	0	0	0	3	1	0	0	2	5	6	10	0	6	1	0	0	1				2	0	11	1
251	Rishesh	20	1	1	1	0	0	1	1	0	0	0	0	0	2	6	0	0	1	4	5	8	0	7	0	0	0	1				1	0	9	1
252	Akshay	30	1	1	0	1	0	3	3	0	0	0	0	0	5	6	0	0	5	5	8	12	0	6	0	0	0	1				4	2	16	2
253	Ritika	27	1	2	1	0	1	0	1	0	0	0	0	0	2	2	0	0	3	3	12	10	1,3,6	7	1,2	0	0	2		11	0	2	1	11	1
254	Gaurav Dubey	29	1	1	1	0	1	1	1	0	0	0	0	0	3	1	0	0	1	5	6	12	0	5	0	0	0	1				2	2	13	1
255	Srishy	27	1	2	1	0	0	2	1	0	0	0	0	0	2	2	0	0	3	3	8	10	0,1,4	6	1,2	0	0	2		8	0	1	0	9	1
256	Komal	22	1	2	1	0	1	1	1	0	0	0	0	0	1	6	0	0	2	5	5	15	0	5	0	0	0	1				2	1	11	1
257	Himanshu	26	1	1	0	0	0	3	3	0	0	0	0	0	4	1	0	0	5	2	6	12	2,3,4	6	1	0	0	2		7	0	1	0	9	1
258	Kapil	31	2	1	0	1	0	2	4	0	0	0	0	0	5	2	0	0	3	5	8	10	0,2	6	1	0	0	2		5	0	2	1	12	1
259	Vanshika	23	1	2	1	0	1	1	1	0	0	0	0	0	3	6	0	0	5	4	4	12	0	7	0	0	0	1				1	1	10	1
260	Amrita	20	1	2	1	0	1	2	1	0	0	0	0	0	1	6	0	0	2	1	8	10	0	6	0	0	0	1				1	0	9	1
261	Prakhar	28	1	1	1	0	0	0	1	0	0	0	0	0	5	2	0	0	5	3	10	5	0,3	6	1	0	0	2		7	0	2	0	11	1
262	Shivam	32	2	1	0	1	0	2	4	0	0	0	0	0	2	1	0	0	1	1	5	10	0	6	0	0	0	1				4	1	16	2
263	Poonam	35	2	2	0	1	1	3	2	0	0	0	0	0	6	6	0	0	5	2	10	8	2,4,6	7	1,2	0	0	2		8	0	0	0	6	1
264	Nida Rehman	37	2	2	1	1	0	1	2	0	0	0	0	0	3	2	0	0	3	2	8	8	3,4	6	1	0	0	2		6	0	1	0	8	1
265	Himani	22	1	2	1	0	1	1	1	0	0	0	0	0	2	6	0	0	1	4	5	12	0	7	0	0	0	1				2	1	13	1
266	Nancy	25	1	2	1	0	0	2	1	0	0	0	0	0	1	2	0	0	4	1	8	15	2,3	6	1	0	0	2		10	0	1	0	11	1
267	Naman	29	1	1	0	1	0	3	3	0	0	0	0	0	3	6	0	0	5	1	6	16	0	6	0	0	0	1				4	2	16	2
268	Shivang	31	2	1	1	1	1	1	6	0	0	0	0	0	2	1	0	0	2	3	4	8	0	5	0	0	0	1				4	1	15	2
269	Aishwarya	28	1	2	0	0	0	2	1	0	0	0	0	0	4	2	0	0	5	3	10	12	0,3,6	6	1,2	0	0	2		7	0	2	1	10	1
270	Divyanshu	33	2	2	0	1	1	2	3	0	0	0	0	0	2	6	0	0	1	5	6	10	0	6	0	0	0	1				4	2	15	2
271	Rashmi	38	2	2	1	1	0	1	2	0	0	0	0	0	10	2	0	0	3	2	5	5	1,2,3	6	1,2	0	0	2		6	0	2	0	11	1
272	Maneesh	41	3	1	1	1	0	3	4	0	0	0	0	0	5	6	0	0	2	1	8	8	0	5	0	0	0	1				4	1	16	2



273	Sahil	34	2	1	0	1	1	2	3	0	0	0	0	0	2	6	0	0	5	5	6	10	0	6	0	0	0	1				3	0	12	1	
274	Swapnil	28	1	1	1	0	0	1	1	0	0	0	0	0	4	2	0	0	3	2	6	10	1,4,6	6	1	0	0	2		8	0	0	0	9	1	
275	Arzoo	23	1	2	1	0	1	1	1	0	0	0	0	0	2	2	0	0	5	3	10	12	2,3,4	7	1,4	0	0	2		9	0	2	0	10	1	
276	Aditya	25	1	1	1	0	0	2	1	0	0	0	0	0	3	6	0	0	1	1	6	12	0	6	0	0	0	1				3	1	12	1	
277	Alok	40	2	1	0	1	0	2	3	0	0	0	0	0	5	2	0	0	4	5	8	10	2,3	6	1	0	0	2		8	0	1	0	9	1	
278	Ankita	32	2	2	1	1	1	2	2	0	0	0	0	0	5	4	0	0	5	2	10	15	0,4,6	6	1,4	0	0	2		9	0	3	0	13	1	
279	Aryan	18	1	1	1	0	0	0	1	0	0	0	0	0	3	2	0	0	5	3	6	10	2,3,4	6	1,2	0	0	2		5	0	0	0	8	1	
280	Azhar	36	2	1	0	1	0	3	4	0	0	0	0	0	4	6	0	0	2	4	8	16	0	7	0	0	0	1				5	1	16	2	
281	Indra Devi	44	3	2	0	1	1	1	2	0	0	0	0	0	3	6	0	0	5	3	5	20	1,3	8	1,2	0	0	2		35	0	0	0	10	1	
282	Vinita	22	1	2	1	0	0	2	1	0	0	0	0	0	0.5	2	0	0	5	2	10	20	0,1,2,3,5,6	7	1,2	0	1	2		27	0	0	0	15	2	
283	Parth	50	3	1	0	1	0	1	9	0	0	0	0	0	3	2	0	0	1	3	5	16	0	6	0	0	0	1				3	1	10	1	
284	Suman	42	3	2	0	1	0	2	5	0	0	0	0	0	6	6	0	0	5	4	6	12	0	7	0	0	0	1				5	2	15	2	
285	Aditi	31	2	2	0	1	0	2	3	0	0	0	0	0	3	1	0	0	5	4	18	10	0	6	1	0	0	1				1	0	11	1	
286	Pravesh	19	1	2	1	0	0	2	1	0	0	0	0	0	0.5	6	0	0	5	5	2	10	0,4	6	1	0	0	2		14	0	2	2	14	2	
287	Anju	43	3	2	1	1	1	2	2	0	0	0	0	0	6	6	0	0	5	1	5	15	0	6	0	0	0	1				2	0	10	1	
288	Nusrat	40	2	2	1	1	0	2	4	0	0	0	0	0	4	2	0	0	3	5	4	10	0	7	0	0	0	1				3	1	13	1	
289	Lalit	23	1	1	1	0	1	2	4	0	0	0	0	0	5	6	0	0	1	5	8	5	0	6	0	0	0	1				4	1	14	2	
290	Raniya	35	2	2	1	1	1	2	2	0	0	0	0	0	2	2	0	0	5	3	10	12	1,2,4	7	1,2,3	0	0	2		32	0	3	2	13	1	
291	Mamta	51	4	2	0	1	0	1	2	0	0	0	0	0	10	6	0	0	2	1	4	10	0	5	0	0	0	1				1	0	12	1	
292	Niharika	18	1	2	1	0	1	1	1	0	0	0	0	0	2	6	0	0	5	2	5	12	0,1,6	6	2,3	0	0	2		20	0	2	1	11	1	
293	Devika	48	3	2	1	1	1	2	2	0	0	0	0	0	5	6	0	0	3	5	5	10	2,4	5	4	0	0	2		9	0	2	2	9	1	
294	Gulab Rani	50	3	2	1	1	1	2	2	0	0	0	0	0	2	6	0	0	1	4	8	15	0	6	0	0	0	1				6	0	14	2	
295	Vamika	43	3	2	1	1	0	2	2	0	0	0	0	0	10	2	0	0	5	2	12	20	1,4,6	7	1,2,3	0	1	2		40	0	2	2	12	1	
296	Munni	60	4	2	0	1	0	3	3	0	0	0	0	0	5	6	0	0	2	4	5	15	0,4	5	0	0	0	1				4	0	14	2	
297	Hazra	45	3	2	0	1	0	2	2	0	0	0	0	0	7	2	0	0	5	3	8	10	0,2,3,6	6	1,2	0	0	2		12	0	3	1	11	1	
298	Narendra	24	1	1	1	0	1	2	1	0	0	0	0	0	3	1	0	0	1	5	6	15	0	6	0	0	0	1				2	0	10	1	
299	Firoz	41	3	1	0	1	1	2	4	0	0	0	0	0	6	5	1	0	5	8	1	20	4,5	7	0	1,2	0	3	1				1	0	9	1
300	Bheema	43	3	2	1	1	0	1	2	0	0	0	0	0	7	6	0	0	1	1	8	15	0	6	0	0	0	1				4	2	15	2	
301	Pista	40	2	2	0	1	1	2	2	0	0	0	0	0	8	2	0	0	5	2	5	10	0,2,3,4	6	1,2	0	0	2		9	0	1	0	9	1	
302	Keshav	19	1	1	1	0	1	1	1	0	0	0	0	0	2	6	0	0	2	4	6	10	0	7	0	0	0	1				2	0	12	1	
303	Ramnaresh	30	1	1	1	1	0	1	6	0	0	0	0	0	4	1	0	0	1	1	8	15	0	6	0	0	0	1				5	2	14	2	
304	Sundar	34	2	1	0	1	0	3	3	0	0	0	0	0	2	6	0	0	5	5	6	15	0	6	1	0	0	1				5	1	15	2	
305	Shreshtha	25	1	2	1	0	1	1	1	0	0	0	0	0	3	2	0	0	5	1	10	10	4,5,6	6	1,2,4	0	1	2		13	0	0	0	9	1	
306	Meva	23	1	2	0	0	0	2	1	0	0	0	0	0	2	2	0	0	3	2	8	12	2,3,5	7	1,2	0	0	2		9	0	1	1	11	1	
307	Kamla	40	2	2	1	1	0	1	2	0	0	0	0	0	4	6	0	0	2	4	6	16	0	6	0	0	0	1				3	1	15	2	
308	Soni	38	2	2	1	1	0	0	7	0	0	0	0	0	3	1	0	0	5	5	8	20	0	5	1	0	0	1				4	1	15	2	
309	Bhumi	19	1	2	1	0	1	1	1	0	0	0	0	0	3	2	0	0	4	1	5	10	1,2,4,6	6	1,2	0	0	2		7	0	0	0	7	1	

310	Sudha	28	1	2	0	1	0	2	2	0	0	0	0	0	1	6	0	0	5	4	10	6	0	6	0	0	0	1				2	0	12	1
311	Saraswati	45	3	2	1	1	0	2	2	0	0	0	0	0	6	2	0	0	3	3	5	8	0,1,3	6	1,4	0	0	2		6	0	3	1	14	2
312	Ramdeen	38	2	1	0	1	1	3	3	0	0	0	0	0	5	6	0	0	1	5	8	15	0	7	0	0	0	1				5	1	16	2
313	Rehana	47	3	2	1	1	0	1	4	0	0	0	0	0	10	2	0	0	3	2	10	10	3,4,6	6	1,2,4	0	0	2		10	0	0	0	10	1
314	Purnima	33	2	2	0	1	0	2	2	0	0	0	0	0	4	1	0	0	2	4	12	20	0	5	0	0	0	1				4	1	14	2
315	Ganga Ram	32	2	1	0	1	1	2	3	0	0	0	0	0	6	2	0	0	5	1	6	8	3,4	6	1,2	0	0	2		12	0	2	0	11	1
316	Sweta	21	1	2	1	0	0	0	1	0	0	0	0	0	2	1	0	0	3	3	10	10	0,1,3	7	1	0	0	2		9	0	1	0	9	1
317	Kaushal	44	3	1	0	1	0	2	3	0	0	0	0	0	5	6	0	0	1	5	5	15	0	5	0	0	0	1				3	0	13	1
318	Neelam	31	2	2	1	1	1	2	2	0	0	0	0	0	3	6	0	0	2	4	8	20	0	6	0	0	0	1				4	1	13	1
319	Geeta	43	3	2	1	1	0	1	4	0	0	0	0	0	6	6	0	0	5	1	6	10	0	6	1	0	0	1				3	1	12	1
320	Eepsita	30	1	2	1	0	1	1	6	0	0	0	0	0	2	2	0	1	5	4	10	12	0	5	0	0	0	1				5	2	16	2
321	Nikky	27	1	2	1	0	0	2	1	0	0	0	0	0	4	2	0	0	3	2	12	15	1,3,5	6	1,4	0	0	2		11	0	2	1	11	1
322	Nimish	28	1	1	1	0	1	1	1	0	0	0	0	0	1	6	0	0	5	1	6	10	0	5	0	0	0	1				3	0	13	1
323	Aashab	29	1	1	0	1	0	3	3	0	0	0	0	0	3	6	0	0	1	5	8	12	0	7	0	0	0	1				4	1	15	2
324	Abhijeet	22	1	1	1	0	1	1	1	0	0	0	0	0	1	1	0	0	2	1	5	15	0	5	0	0	0	1				2	0	12	1
325	Abhilasha	31	2	2	1	1	0	2	2	0	0	0	0	0	4	4	0	0	5	5	10	8	0,1,4,6	7	1,2	0	0	2		6	0	3	1	13	1
326	Jaya	29	1	2	0	1	0	2	2	0	0	0	0	0	5	2	0	0	4	3	6	10	0,2,3	6	1	0	0	2		8	0	1	0	10	1
327	Utkarsh	33	2	1	1	1	0	1	4	0	0	0	0	0	2	6	0	0	5	4	4	15	0	5	0	0	0	1				5	1	16	2
328	Mayank	36	2	1	0	1	1	2	3	0	0	0	0	0	3	6	0	0	1	5	8	10	0	6	1	0	0	1				4	0	16	2
329	Saurabh	40	2	1	1	1	0	1	4	0	0	0	0	0	7	2	0	0	3	3	10	12	0,3,4	6	1,2	0	0	2		9	0	2	0	12	1
330	Sajal	28	1	1	1	0	1	2	1	0	0	0	0	0	3	6	0	0	5	1	8	15	0	7	0	0	0	1				4	0	15	2
331	Nitin	25	1	1	1	0	1	1	1	0	0	0	0	0	2	6	0	0	5	4	6	10	0	6	0	0	0	1				3	1	14	2
332	Vaishnavi	26	1	2	0	0	0	2	1	0	0	0	0	0	4	2	0	0	2	2	8	8	1,3,4,6	7	1,2	0	0	2		9	0	2	0	12	1
333	Shalini	36	2	2	1	1	0	1	2	0	0	0	0	0	3	1	0	0	1	1	10	20	0	6	0	0	0	1				5	1	15	2
334	Samridhi	25	1	2	1	0	0	0	1	0	0	0	0	0	3	6	0	0	5	4	6	15	0	6	0	0	0	1				4	1	14	2
335	Shreya	28	1	2	0	0	1	1	1	0	0	0	0	0	5	2	0	0	3	2	10	12	2,3,4	7	2,4	0	0	2		12	0	1	0	9	1
336	Yashi	21	1	2	1	0	1	2	1	0	0	0	0	0	3	1	0	0	5	3	8	10	1,6	5	1,2	0	0	2		8	0	2	0	10	1
337	Reena	31	2	2	0	1	1	3	3	0	0	0	0	0	4	6	0	0	1	4	6	16	0	6	0	0	0	1				4	0	15	2
338	Saksham	32	2	1	1	1	1	0	6	0	0	0	0	0	2	2	0	0	5	1	4	8	0	5	0	0	0	1				2	0	11	1
339	Pariniti	26	1	2	1	0	0	1	1	0	0	0	0	0	5	2	0	0	4	3	12	15	2,3,5,6	6	1	0	1	2		10	0	1	0	9	1
340	Shefali	22	1	2	1	0	1	0	1	0	0	0	0	0	2	1	0	0	5	5	6	20	0	6	0	0	0	1				3	0	14	2
341	Tarique	35	2	1	0	1	0	2	4	0	0	0	0	0	4	2	0	0	5	3	8	10	1,2,4	7	1,2	0	0	2		9	0	0	0	10	1
342	Divya	26	1	2	1	0	1	1	1	0	0	0	0	0	2	6	0	0	3	2	10	8	2,3	5	2	0	0	2		8	0	1	0	11	1
343	Ashutosh	29	1	1	1	0	0	2	1	0	0	0	0	0	3	6	0	0	4	1	6	10	0	6	0	0	0	1				3	1	14	2
344	Rajat	34	2	1	0	1	0	3	3	0	0	0	0	0	4	1	0	0	2	4	8	15	0	6	0	0	0	1				4	0	16	2
345	Shatakshi	21	1	2	1	0	1	0	1	0	0	0	0	0	2	2	0	0	5	2	8	6	3,6	6	1,2	0	0	2		5	0	2	0	10	1
346	Kajal	28	1	2	1	0	0	1	1	0	0	0	0	0	6	1	0	0	3	5	4	10	1,4,5	6	1,4	0	1	2		8	3	1	0	7	1

347	Shikhar	37	2	1	0	1	1	3	4	0	0	0	0	0	0	3	6	0	0	5	1	8	12	0,2,3	7	1	0	0	1				3	0	14	2
348	Shubham	30	1	1	1	0	1	1	6	0	0	0	0	0	2	2	0	0	3	5	5	8	0,1,4	6	2,4	0	0	2		10	0	3	1	15	2	
349	Apoorv	29	1	1	1	0	0	2	1	0	0	0	0	0	6	1	0	0	4	3	10	10	0,3,6	6	1,3	0	0	2		8	0	2	1	12	1	
350	Manisha	32	2	2	0	1	0	3	4	0	0	0	0	0	1	6	0	0	5	4	6	20	0	6	0	0	0	1				5	2	17	2	
351	Yogita	28	1	2	1	0	1	1	1	0	0	0	0	0	4	2	0	0	3	5	8	10	1,3,5	7	1,2	0	0	2		6	0	1	0	10	1	
352	Swarna	32	2	2	1	1	0	0	2	0	0	0	0	0	2	6	0	0	5	1	4	12	0,3	6	0	0	0	1				4	0	16	2	
353	Rahul	24	1	1	1	0	0	2	1	0	0	0	0	0	4	6	0	0	1	1	5	15	0	6	0	0	0	1				2	0	12	1	
354	Sheetal	20	1	2	1	0	1	1	1	0	0	0	0	0	1	2	0	0	3	2	8	10	1,2,4	6	2	0	0	2		8	0	0	0	7	1	
355	Ashish	26	1	1	1	0	0	2	1	0	0	0	0	0	5	1	0	0	4	5	10	12	0,3	7	0	0	0	1				4	1	15	2	
356	Supriya	25	1	2	1	0	1	0	1	0	0	0	0	0	2	2	0	0	5	3	6	6	1,3,6	6	1,2	0	0	2		6	0	2	0	11	1	
357	Rajeev	32	2	1	0	1	0	2	3	0	0	0	0	0	4	6	0	0	1	1	8	5	0	6	1	0	0	1				4	0	16	2	
358	Ravindra	27	1	1	1	0	1	1	4	0	0	0	0	0	1	2	0	0	5	1	6	10	0,1	7	0	0	0	1				5	2	16	2	
359	Madhavi	29	1	2	0	1	0	3	2	0	0	0	0	0	5	1	0	0	3	5	10	10	1,3,4,6	6	1,2,4	0	0	2		9	0	1	0	10	1	
360	Lata	42	3	2	0	1	1	2	3	0	0	0	0	0	8	2	0	0	5	2	8	8	2,3,5	7	1,2	0	0	2		10	0	2	0	12	1	
361	Sushma	37	2	2	1	1	0	1	2	0	0	0	0	0	5	6	0	0	2	4	5	15	0	6	0	0	0	1				6	2	18	2	
362	Rachit	29	1	1	1	0	1	0	1	0	0	0	0	0	4	1	0	0	5	5	6	6	2,4,5	6	2	0	0	2		5	0	1	0	9	1	
363	Ubhay	31	2	1	0	1	0	2	4	0	0	0	0	0	2	2	0	0	1	1	8	10	0	7	0	0	0	1				4	1	15	2	
364	Akrati	22	1	2	1	0	1	1	1	0	0	0	0	0	1	1	0	0	3	3	5	8	3,6	5	2,3	0	0	2		5	0	1	0	11	1	
365	Alka	24	1	2	1	0	0	0	1	0	0	0	0	0	3	6	0	0	5	2	4	12	1,6,7	6	2,4	0	0	2		9	0	2	0	13	1	
366	Anamika	25	1	2	1	0	1	1	1	0	0	0	0	0	2	6	0	0	2	4	8	15	0	8	0	0	0	1				4	1	14	2	
367	Aniesha	23	1	2	1	0	1	1	1	0	0	0	0	0	5	2	0	0	5	5	10	10	2,5,7	7	1,2,3	0	0	2		9	3	1	1	12	1	
368	Anushka	26	1	2	1	0	0	2	1	0	0	0	0	0	1	6	0	0	1	1	6	6	0	6	0	0	0	1				3	1	14	2	
369	Arpita	28	1	2	0	1	1	2	2	0	0	0	0	0	3	2	0	0	3	2	8	10	1,3,5	7	1,3	0	0	2		9	0	2	1	10	1	
370	Arshita	21	1	2	1	0	1	0	1	0	0	0	0	0	2	1	0	0	5	5	5	15	0	6	0	0	0	1				4	1	15	2	
371	Priya	33	2	2	0	1	0	2	2	0	0	0	0	0	6	6	0	0	2	4	8	20	0	7	0	0	0	1				5	2	16	2	
372	Praveen	40	2	1	1	1	0	1	4	0	0	0	0	0	2	6	0	0	5	1	6	12	0	6	0	0	0	1				4	1	13	1	
373	Anshu	36	2	1	0	1	1	2	3	0	0	0	0	0	6	1	1	0	5	8	1	20	5	7	1	1,2	0	3	1				1	0	9	1
374	Harsh	35	2	1	1	1	0	0	4	0	0	0	0	0	3	2	0	0	3	3	8	5	3,5	6	1,2	0	0	2		7	0	0	0	7	1	
375	Rishabh	32	2	1	1	1	1	1	4	0	0	0	0	0	1	6	0	0	1	4	5	15	0	7	0	0	0	1				5	1	17	2	
376	Bidisha	27	1	2	1	0	0	0	1	0	0	0	0	0	7	2	0	0	5	1	4	10	0,1,4	8	1,4	0	0	2		9	2	2	0	13	1	
377	Zubair	35	2	1	0	1	1	2	3	0	0	0	0	0	3	6	0	0	2	1	6	8	0	7	0	0	0	1				5	1	16	2	
378	Pallavi	31	2	2	1	1	0	1	2	0	0	0	0	0	2	6	0	0	1	4	8	12	0	7	0	0	0	1				4	1	15	2	
379	Mitali	30	1	2	1	0	1	0	6	0	0	0	0	0	10	2	0	0	5	2	5	6	0,2,3,5	7	1,2	0	0	2		7	0	2	0	12	1	
380	Satyam	24	1	1	1	0	1	1	1	0	0	0	0	0	3	6	0	0	5	4	6	15	0	6	0	0	0	1				5	0	16	2	

**MASTER CHART CODING KEY**

Variable	0	1	2	3	4	5	6	7	8	9	10	11
Serial Number												
Name												
Age (Years)												
Age		18-30 Years	31-40 Years	41-50 Years	51-60 Years	61-70 Years						
Gender		Male	Female									
Residence	Rural	Urban										
Marital Status	Unmarried	Married										
Family Structure	Joint	Nuclear										
Socioeconomic	Upper Class	Upper Middle Class	Middle Class	Lower Middle Class	Lower Class							
Occupation		Student	Housewife	Farmer	Shopkeeper	Labourer	Lawyer	Teacher	Sales Person	Others		
Hypertension	No	Yes										
Diabetes	No	Yes										
Thyroid Disorder	No	Yes										
Coronary Artery Disease	No	Yes										
Stroke	No	Yes										
Epilepsy	No	Yes										
Duration of Illness (Years)												
Location of Headache		Frontal	Hemicranial	Temporal	Occipital	Periorbital	Holocranial					
Facial Pain	No	Yes										
Neck Pain	No	Yes										
Timing of Headache		Afternoon	Evening	Morning	Night	Variable						
Character of Headache		Pressure	Throbbing	Pulsating	Band Like	Heaviness	Stabbing	Burning	Lancinating			
Duration of Headache (Hours)												
Frequency of Headache (Episodes/Month)												
Triggers	Stress	Auditory	Fatigue	Fasting/Missing a Meal	Sleep Deprivation	Weather	Visual	Olfactory	Coughing/Straining	Exercise	Sexual Activity	Alcohol
Pain Severity Scale												
Associated Features	None	Nausea/Vomiting	Photophobia	Phonophobia	Vertigo/Dizziness							
Autonomic Symptoms	None	Lacrimation	Redness	Ptosis	Miosis							
Aura	Absent	Present										
Diagnosis		Tension-Type Headache	Migraine	Trigeminal Autonomic Cephalalgia								
Type of Trigeminal Autonomic Cephalalgia		Cluster Headache	Paroxysmal Hemicrania									
Migraine Disability Assessment												
Allodynia Symptom Checklist-12												
Generalised Anxiety Disorder												
Patient Health Questionnaire												
Perceived Stress Scale												
Perceived Stress Scale Category		Low Stress	Moderate	High Perceived Stress								

## Appendix V (Plagiarism Report)



### Plagiarism Checker X - Report

Originality Assessment

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