

**Title:**  
**Clinico-epidemiological  
study of primary headache  
in tertiary care hospital.**

Presented by

**Dr. Amit Das**

**FCPS (MEDICINE) Part-II**

# *AUTHORS*

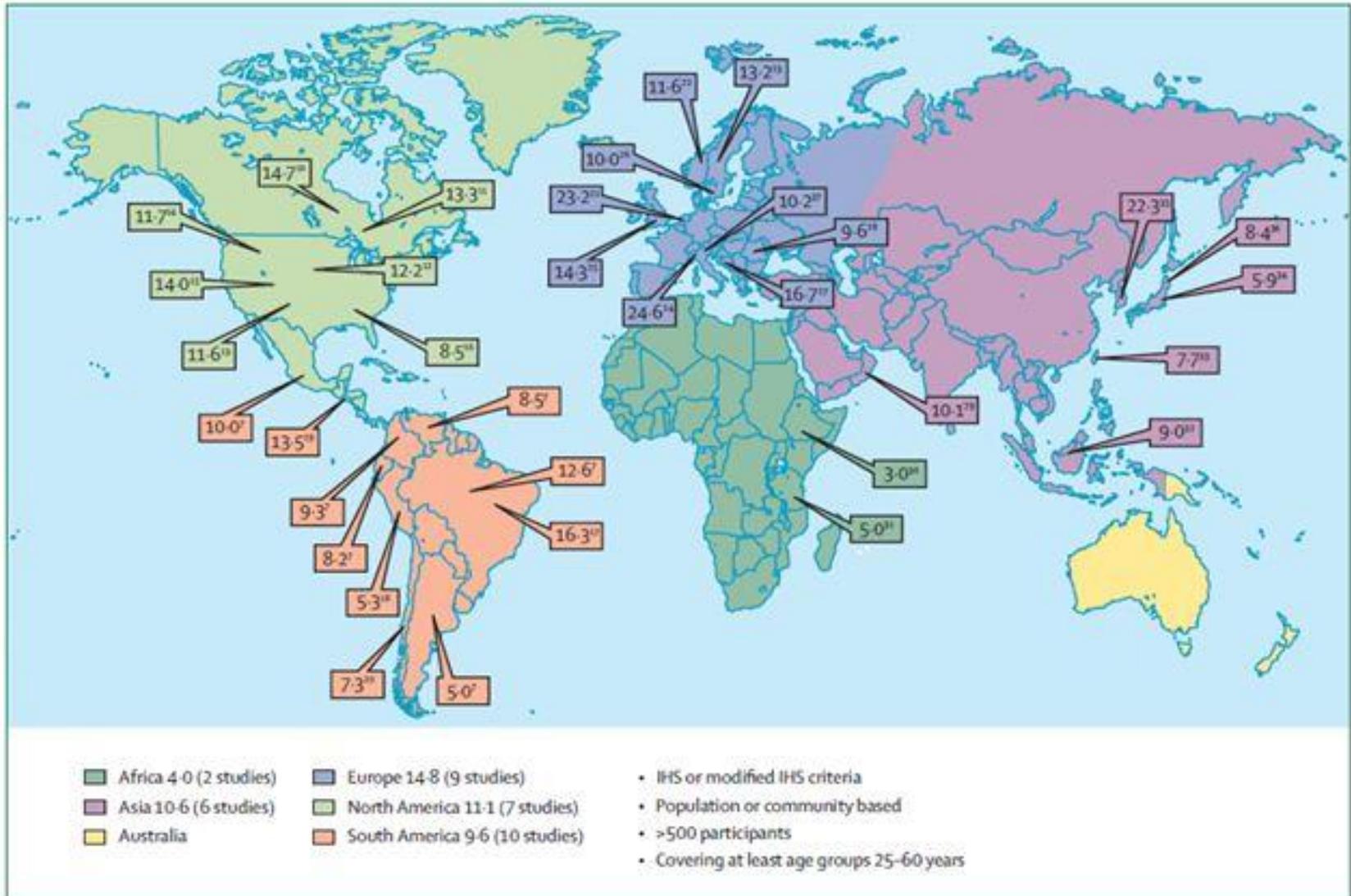
- **Dr. Amit Das**
- Prof. Md. Azizul Kahhar.
- Dr. Robed Amin,
- Dr. Shantanu Das

# Introduction:

- Headache: painful processes occurring in the head.
- Common complaints encountered by the physician.
- Epidemiology of headache reflect the enormous scope of headache disorders and underscore the need to provide effective therapies for the sufferers.

- Numerous cross-sectional studies have established that two types of primary headache--  
- migraine and tension-type headache, are prevalent in the general population.
- Remain ambiguous that migraine are different from those with TTH and those with both migraine and TTH differ from patients with either pure migraine or pure TTH.

# The global prevalence of chronic headache



- Headache is among the ten most disabling disorders for both sexes. Burden of TTH is included in WHO's ranking of the five most disabling disorders for women.
- Likelihood of migraine is significantly greater in patients having history of depressive or anxiety disorders.
- Relation between psychic disorder and TTH or combined headache--- unclear.

- Epidemiological study of headache helps us to understand the frequency and nature of headache and the factors that influence it. They help us to improve our knowledge about the mechanism of headache, its clinical feature and management protocols

# Rationale:

- Scope and scale of the burden of headache is underestimated
- Headache disorders are universally remain under-recognized and undertreated.
- The rates of migraine and other subtypes of headache are remarkably similar across the world

- Epidemiological data for headache are abundant in developed countries.
- Scarce in developing countries.
- Epidemiological variability necessitates headache prevalence study in selected population.
- Clinico-epidemiological study can have impact on headache exploration and treatment accordingly.

# Materials and Method

- **Study Design:** A cross-sectional study done at department of Medicine, Dhaka Medical College Hospital from July 2010 to February 2011.
- **Study population :** Patients aged between 18-60 yrs presented with clinically defined Primary headache using INTERNATIONAL HEADACHE SOCIETY (IHS) 2004 criteria.

# Sampling and data collection

- Purposive sampling. The sample from every defined aged group presented with headache until the desired sample size 100 was reached.
- Informed written consent taken and a questionnaire for clinical and relevant epidemiological data.
- Thorough clinical examination, ophthalmoscopy etc.

- **IHS** classification and diagnostic criteria of headache:
- **1. Migraine** and variants
- **2. Tension-type** headaches and variants
- **3. Cluster** headache and other trigeminal autonomic cephalgias
- **4. Other** primary headaches

# Variable:

Primary Variable: Types of headache

1. Migraine and variants
2. Tension-type headaches and variants
3. Cluster headache

Secondary Variable:

1. Age
2. Sex
3. Occupation
4. Socio economic condition
5. Area of residence

# Statistical Analysis:

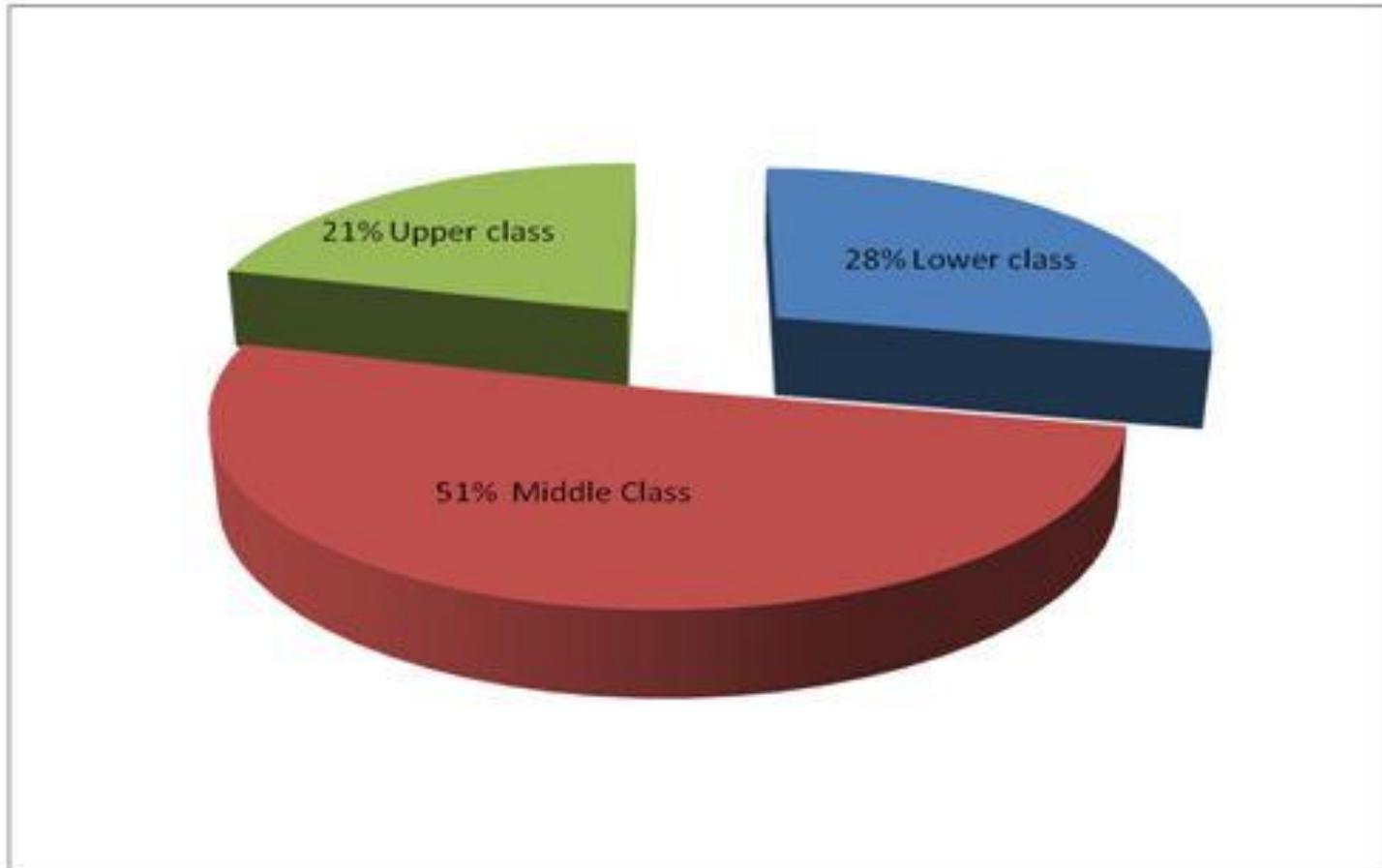
- Data were processed manually and analyzed with the help of SPSS (Statistical package for social sciences) version 17. Quantitative data were expressed as rate, frequency, mean and standard deviation. Pearson Chi-Square test was executed for test of association.

# Result

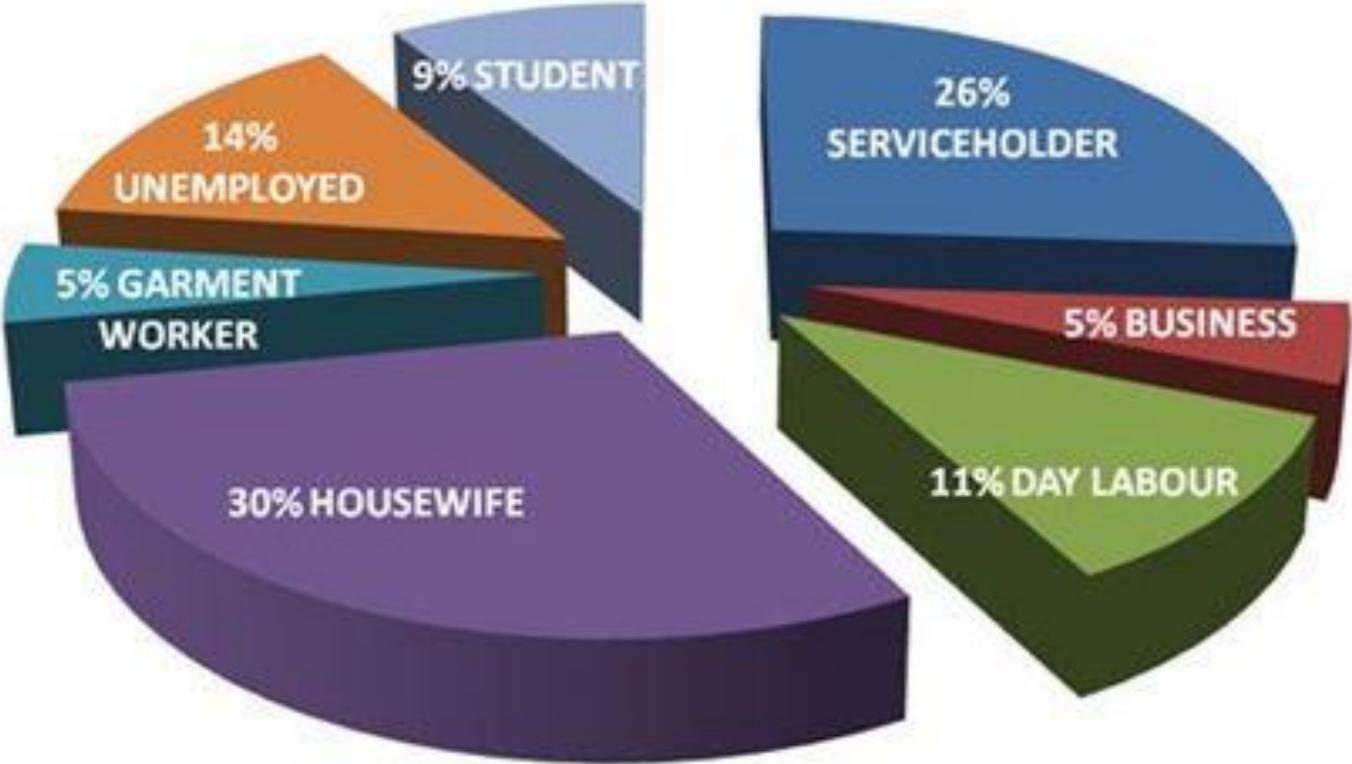
- **Distribution of the study subjects by sex (N=100)**

AGE GROUPS	SEX		
	MALE	FEMALE	RATIO
18-27	7(26.9%)	19(73.1%)	1 : 2.71
28-37	16(40%)	24(60%)	1 : 1.5
38-47	6(30%)	14(70%)	1 : 2.33
48-57	3(37.5%)	5(62.5%)	1 : 1.67
58-60	3(50%)	3(50%)	1 : 1
TOTAL	35	65	1 : 1.9

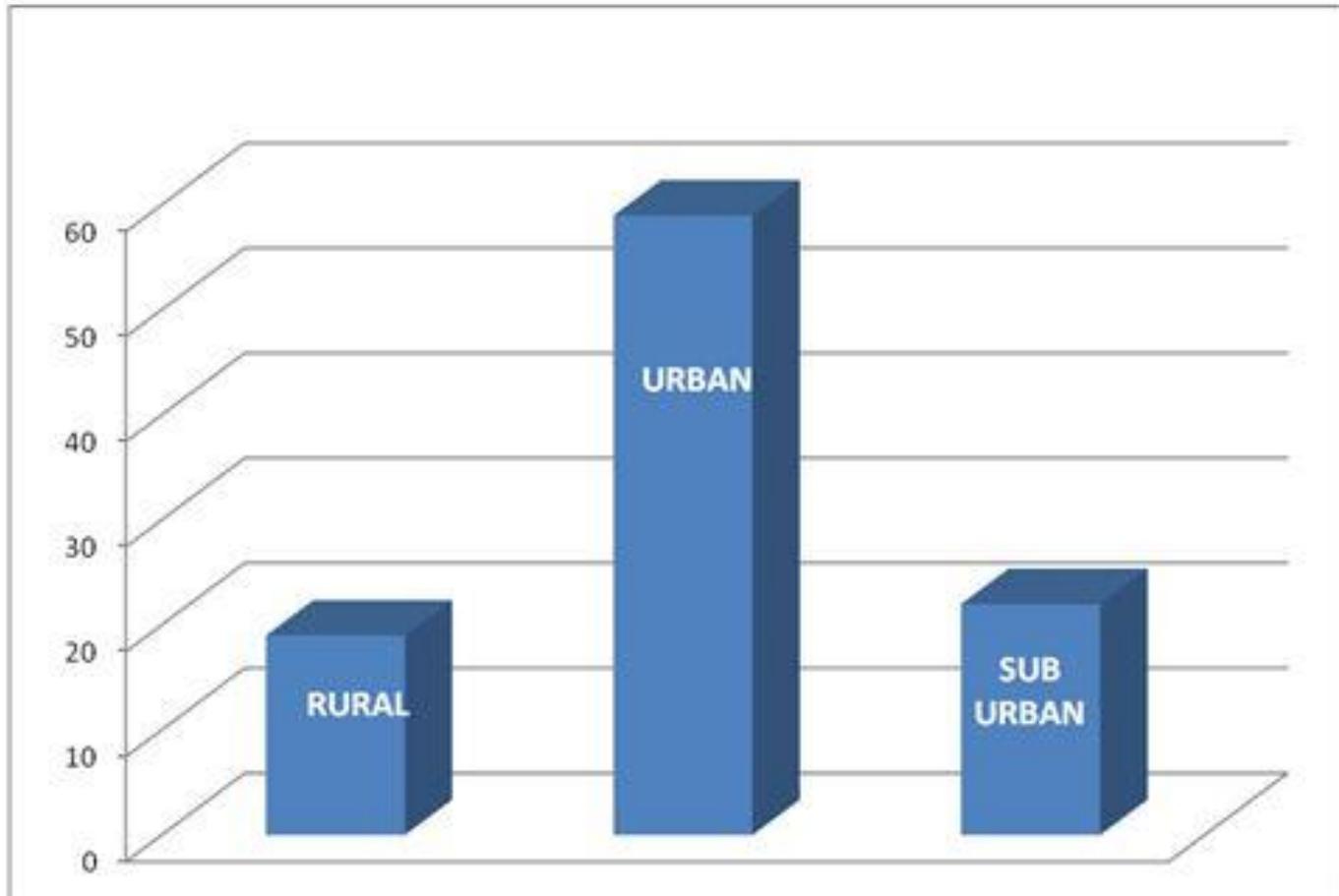
# Socioeconomic classification (N=100)



# Occupational Variation (N=100)



# Residence of the patients (N=100)



# Cross tabulation between sex and headache types

SEX	HEADACHE TYPE				Total	“P” value
	MIGRAINE	TENSION TYPE HEADACHE	CLUSTER HEADACHE	OTHER PRIMARY HEADACHES (%)		
MALE	5	25	3	2	35	0.27
FEMALE	13	44	1	7	65	
Ratio	1 : 2.6	1 : 1.76	1 : 0.33	1 : 3.5	1 : 1.9	

# Cross tabulation between age-group and headache type (n=100)

AGE GROUP	HEADACHE TYPE				Total
	MIGRAINE	TENSION TYPE HEADACHE	CLUSTER HEADACHE	OTHER PRIMARY HEADACHES (%)	
18-27	8	18	0	0	26
28-37	6	32	0	2	40
38-47	3	11	1	5	20
48-57	1	4	2	1	8
58-60	0	4	1	1	6
TOTAL	18	69	4	9	100

# Cross tabulation between occupation and headache types (N=100)

OCCUPATION	HEADACHE TYPE				Total
	MIGRAINE	TENSION TYPE HEADACHE	CLUSTER HEADACHE	OTHER PRIMARY HEADACHES (%)	
SERVICEHOLDER	4	18	2	2	26
BUSINESS	0	3	2	0	5
DAYLABOUR	4	6	0	1	11
HOUSEWIFE	3	22	0	5	30
GARMENT WORKER	2	3	0	0	5
UNEMPLOYED	2	11	0	1	14
STUDENT	3	6	0	0	9
TOTAL	18	69	4	9	100

# DISCUSSION

- Migraine, tension type headache (TTH), cluster type, and primary headaches of other variety clinically diagnosed and documented during this observation were 18% suffered from migraine, 69% had tension type headache, 4% had cluster headache and 9% had primary headache due to some other etiology.

- This study showed that the largest frequency of participant was from 28 to 37 years age group and that was 40% with the mean age 32 years (Std. Deviation=2.48779).
- In case of our study we tried to determine migraine, tension type headache or TTH, cluster headache and primary headache of other variety in all the age group.

- Study of Felício et al (2004) showed the mean age was  $40.7 \pm 15$  years. Cheung (2000) observed that headache complaint was higher in his study population aged from 25 to 35 years.
- We found in 18-27 years age group 8% were migraineous and 18% were of non migraineous that was TTH variety.

- This relation between age group with headache variety indicated that migraine headache was less in occurrence than that of non-migraineous in all age groups.
- Moreover headache incidence was less common with the advancement of the age.

- Male patients were 35 percent and female were 65 percent and male female ratio 1:1.9.
- Study of Srikiatkachornn (1991) found 36 males (14.94%) and 205 females (85.06%) and the ratio (male: female = 1:5.6),
- Domingues et al (2005) found that out of 108 headache sufferers 82 were women (65%) and 26 were men (33.8%).

- Ojini et al. (2009) identified 3.2% male and 10.9% female patient suffered from migraine, tension type headache was experienced by 17.3% male and 19.2% female, unclassified headache occurred in 1.8% male and 3.8% female.
- Merikangas et al (2010) found in their study that they had symptoms was 86.7% (SE 3.8%) for migraine with aura, 75.6% (1.5%) for migraine without aura.

- Köseoglu et al. (2002) found the prevalence of migraine was 12.5% (143 patients), comprising 7.3% (84) migraine with aura and 5.2% (59) migraine without aura.

- Cheung (2000) demonstrated the occupation of headache sufferers were housewives (17% migraine, 21 percent had TTH, 21% had unclassified) and service holder (27% migraine, 26% had TTH, unclassified headache complained by 27.1%).
- Köseoglu et al. (2002) showed 18.4% housewives had TTH, while 11.9% had migraine. In the same study 21% working female had TTH and 15.8% had migraine.

- Mitsikostas et al (1995) that 37.5 % were from lower socio-economic status, 42.7% from middle and 19.8 from upper socio-economic class.
- Queiroz et al (2005) found a different observation where 31% of the participants represented upper class, 44.3% from the middle class and 48% from the lower socio-economic condition

- Köseoglu et al. (2002) observed in 1146 adult female patients with headache, of whom 34.5% of headache sufferer reported the hospital were from urban part and the 27.2% were from rural area, and among the rest some were suburban.

# Conclusion

- This study was designed to determine clinical and epidemiological characteristics of Primary headache among individuals aged 18 to 60 years visited to tertiary care hospital using INTERNATIONAL HEADACHE SOCIETY (IHS) 2004 criteria.
- Greater occurrence of Tension Type Headache involving mostly the female gender, 20's and 30's age group, job stresses and unemployed people raised this possibilities of significant impact of socio-economic status on headache presentation in perspective of developing countries.