Original article

Classification and clinical features of primary headache in Akaki Textile Mill workers, Ethiopia

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Abstract

Background: Various forms of headaches are among the most common complaints of the nervous system in neurologic practice. Primary headache disorders are disabling. They are defined based on symptom-profiles on the characteristics of attacks, which general and neurological examinations reveal to be normal and are mostly diagnosed by a good history and a physical examination. Most headaches can be optimally managed in primary care settings.

Objective: to describe the clinical profiles, triggering factors and classification of primary headaches among the workers of Akaki Textile Mills in Addis Ababa.

Methods: A cross-sectional study wherein data collection and examination of cases using a structured and pre-tested questionnaire were done by the investigator.

Results: Of 181 cases with primary headache the majority (60%) were tension type headaches with a female to male ratio of 1.8 to 1, followed by migraine headache in (38%), cluster headache and trigeminal autonomic cephalalgia 1.2% in each.

Twenty-eight percent had migraine without aura; 9% had migraine with aura and 0.6% of the patients with probable migraine.

The clinical profiles of migraine were found to be unilateral headache, throbbing or pulsating quality, severe to moderate attacks, aggravated by physical activity and relieved by resting or lying down, phonophobia, photophobia and nausea or vomiting. The triggering factors were stress, smell, weather, exhaustion and alcohol. Family history of migraine was found in 44%.

Frequent episodic tension type headache was found most commonly in 26% followed by infrequent tension type in 22%, chronic tension type in 11% and probable tension type in 2%. Family history of tension headache was found in 40%.

The clinical profiles of tension headache were bilateral headache localized to the forehead in a band like pressure or tightness with a mild to moderate intensity and anorexia. Some of the triggering factors were annoyance or stress, change of weather, smell, and exhaustion.

Conclusion and Recommendation: clinical profiles and triggering factors help in the diagnosis of primary headaches. Community based well designed study representing the whole nation both rural and urban is recommended. [*Ethiop. J. Health Dev.* 2012;26(2):107-114]

Introduction

Various forms of headaches are among the most common complaints of the nervous system in neurologic practice occurring as primary disorder or secondary to different diseases.

When they occur as primary headaches without any other illness, the most common ones are tension type headache, migraine, cluster headache and chronic daily headache syndromes. Primary headaches are defined based on symptom profiles and the characteristics of attacks. Contrary to the secondary headache, which are defined from the etiology such as head and/or neck trauma, cervical vascular disorder, infection, tumor mass, substance or their withdrawal etc., these are mostly diagnosed by a good history and a physical examination alone These primary headaches cause not only pain but also substantial levels of disability in the community, country and or the world at large in general and the family or individual in particular (1, 2).

Onset of migraine can start from childhood onwards but it becomes most common in the 20s and 30s and is relatively infrequent after the age of 40 years; therefore, prevalence increases from the first to fourth decades and declines thereafter. The frequency of migraine attacks is highly variable, from once per year in some to once per weak in as many as 25% of the sufferers. The average may be as many as 21 episodes per sufferer per year. Tension type headache is the most widespread of headache disorders. Onset is often in the teen years of age and prevalence peaks in the fourth decade and then declines. A large part of the population has mild and infrequent tension type headache (once monthly or less), with 20-30% experiencing headache episodes more often. Tension type headache is more common in women, in a ratio of 1.5 to 1 (3).

Headache in Africa is common, although less frequent than in the northern hemisphere and exhibits similar clinical manifestations (4). Few population-based studies have been carried out in developing countries. The majority of people with primary headache disorders live in the developing world where limited funding and large and often rural populations, coupled with the low profile of headache disorders compared with other diseases,

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prevent the systematic collection of information (1, 5). There is a scarcity of data on the prevalence, triggering factors, classification, clinical features and treatment of primary headaches in sub-Saharan Africa in general and in Ethiopia in particular (5). The prevalence of the headaches is low as compared to Europe and North America. In 2004, a one-year prevalence of headache from a door-to-door survey of rural south Tanzania was 23.1% (18.8% males and 26.4% females). The study showed that the one-year prevalence of migraine was 5% with a male to female ratio of 1:2.8 and migraine without aura was 1.4% while migraine with aura was 3.6% (6). From a 1995 study done in Ethiopia, a one-year prevalence of migraine was 3% (4.2% females and 1.7% males) with a peak age in the fourth decade (7).

The common headache disorders require no special investigation and they are diagnosed and managed with skills that should be generally available to all physicians. In theory, therefore, most headaches can be optimally managed in primary health care facilities. There are barriers to effective care of these primary headache disorders. These barriers vary throughout the world, but may be classified as clinical, social, political or economic (1). For the developed nations, there are many cost-effective, efficacious treatments available, but these are limited, unavailable or unaffordable in the developing nations (3, 7-10).

Moreover primary headaches are often misdiagnosed, unclassified, neglected or unaddressed particularly in the developing nations, because of many reasons. Lack of knowledge on the classification, clinical profiles and triggering factors of headache is believed to be the main reason. This study is trying to fill this gap and hopefully aware clinicians and care providers at primary levels particularly and at all levels of care for that matter in this part of the world. It might be used as an entry point for the inclusion of primary headaches in the medical curricula which is lacking in most of the teachings which is a worldwide problem. Correct diagnosis of primary headaches and reporting them are the main steps in meeting the goal of the international slogan" lifting the burden of headache" by WHO and international headache society.

The objective of this study is to describe the clinical profiles, triggering factors, classification and types of primary headaches among the workers of Akaki Textile Mill in Addis Ababa, as well generate data for health policy makers and for clinicians that provide care.

Patients and Methods

The study population included all workers with primary headache in the Akaki Textile Mill. It had 1300 workers. Of all, 195 workers refused to participate in the study, 1105 workers volunteered and participated in the study out of which 181 were having primary headaches. A cross-sectional prevalence study that was conducted from November 1/2007 to March 28/2008 identifying cases of primary headache patients was published in 2008 in the journal headache and pain (11).

For this study additional data on the clinical features, profiles and triggering factors of headache were collected from all 181 sufferers subsequently from December 1, 2008 to April 30, 2009. Akaki Textile Mill is located in Akaki Kality sub-City about 25 kilometers South of Addis Ababa. It was about 56 years old, being one of the oldest factories of the country.

Data collection was done by the principal investigator using structured and pre-tested questionnaire. The questionnaire was divided into two parts: the first part focused on the demographic and personal aspects and the second dealt with the specific details of headache, triggering factors and clinical profiles. Cases with positive history of headache were interviewed and examined by the physician trained in headache medicine, internal medicine and neurology.

Subjects were diagnosed in accordance to the most frequent type of headache experienced in the past one year, using the revised 2004 International Headache Society diagnostic criteria set for each primary headache disorder (12). Migraine, tension type headache and cluster headache were diagnosed when all criteria were fulfilled. The diagnosis of probable was made when all but any one criterion were fulfilled respectively. Chronic headache was diagnosed when the frequency of headache was 15 days or more per month at least for three months or 180 days or more in a year.

Data quality was checked and refined. Revisiting and reexaminations done repeatedly in all 181 diagnosed cases as well both preventive and abortive therapy provided in collaboration with the factory clinic. Incomplete questionnaires were filled up again and corrected with data cleaning. The collected data were processed with a computer Epi-Info version 2002 and SPSS 11.0 software packages while tables and bar graphs were used for data presentation.

Ethical consideration: The proposal was submitted to the then Faculty Research and Publication Committee (FRPC) of Addis Ababa University Faculty of Medicine for meeting the rules and regulations. It was approved on October 5/2007. Institutional ethical clearance was obtained along with the informed consent from the study participants. Every participant had apprised of his/her right to refuse or withdraw from the study. Patients with secondary headaches were excluded from the study.

Definitions

1. **Tension type headache** comprises headache attacks with mild to moderate pain intensity and is often described as having a pressing or tightening (non-pulsating) quality that is not aggravated by routine physical activity, such as walking or climbing stairs. The pain lasts for at least several hours to days and is

predominantly felt bilaterally. It can be classified into three subtypes according to the International Classification of Headache Disorders based on frequency: (1) infrequent episodic TTH (<12 headache incidences per year or < 1 day per month); (2) frequent episodic TTH (12-180 days/year or >1 and < 15 days per month at least for three months); and (3) chronic TTH.

2. **Migraine headache** is an idiopathic recurring headache disorder manifesting in attacks lasting 4 to 72 hours. The characteristics of headache are usually unilateral location, pulsating or throbbing quality, moderate or severe intensity, aggravated by routine physical activity, and association with nausea, photophobia or phonophobia.
3. **Cluster headache** is severe unilateral, orbital or supra-orbital or temporal pain lasting between 15 and 180 minutes without treatment, and occurring from once every other day to 8 times per day and is associated with one or more of the following: conjunctival injection, lacrimation, nasal congestion, rhinorrhea, forehead and facial sweating, miosis, ptosis, or eyelid edema.
4. **Probable tension or migraine headache** are diagnosed as such where all but one respective diagnostic criteria are fulfilled, and **chronic tension or migraine headache** diagnoses are made where headache attacks occur 15 days or more in a month for three months or >180 days per year (12).

Results

Based on the international headache diagnostic criteria, there were 181 patients with recurrent primary headache in the last one year, out of examined 1105 workers of the factory. The female to male ratio was 1.7 to 1, with the females being 114 (63%) and males 67 (37%). Peak age group was 45 to 54 years accounting for 106 (58.6%) of the cases and 154 (85.1%) being below 55 and in the productive years with a mean age of 47.3 ±7.3 years (Table1).

Table 1: **The age and sex profiles of primary headache patients, Akaki Textile Mill, Addis Ababa, 2008 to 2009 (No 181)**

Age(years)	Female		Male		Total	
	No	%	No	%	No	%
25-34	6	5.3	4	6.0	10	5.5
35-44	22	19.3	16	23.9	38	21.0
45-54	68	59.6	38	56.7	106	58.6
55-64	18	15.8	9	13.4	27	14.9
Total	**114**	**63.0**	**67**	**37.0**	**181**	**100.0**

Of the cases 109 (60.2%) were tension type headache in which females were 70 (61.4%) and 39 (58.2%) were males, making the female to male ratio 1.8 to 1. Frequent episodic tension type headache was the most common accounting for 47 (26%) followed by infrequent tension type in 39 (21.6%), chronic tension type in19 (10.5%) and probable tension type in 4 (2.2%). The chronic tension type was more than fivefold in females than in males.

Migraine headache accounted for 68 (37.6%) again females were 43 (63.2%) with the female to male ratio of 1.7 to 1 followed by cluster headache and trigeminal autonomic cephalalgia 2 (1.2%) in each. Of the patients of migraine headache, 51 (75.0%) had migraine without aura; 16 (23.5%) had migraine with aura and 1 (1.5%) of the patients with probable migraine. Migraine without aura was 36 (31.6%) in females and 15 (22.4%) in males with a female to male ration of 2.4 to 1 (Table2).

Table 2: **Classification of primary headaches among Workers of Akaki Textile Mill, Addis Ababa, 2008 to 2009 (No 181)**

Type of headache	Females		Males		Total	
	No	%	No	%	No	%
Tension type headache	**70**	**61.4**	**39**	**58.2**	**109**	**60.2**
Frequent episodic tension type	30	26.3	17	25.4	47	26.1
Infrequent episodic tension type	22	19.3	17	25.4	39	21.6
Probable tension type headache	2	1.8	2	3.0	4	2.2
Chronic tension type headache	16	14.0	3	4.5	19	10.5
Migraine headache	**43**	**37.7**	**25**	**37.3**	**68**	**37.6**
Migraine without aura	36	31.6	15	22.4	51	28.2
Migraine with aura	6	5.3	10	14.9	16	8.8
Probable migraine	1	0.9	0	0.0	1	0.6
Trigeminal autonomic cephalalgia	**1**	**0.9**	**1**	**1.5**	**2**	**1.1**
Cluster headache	**0**	**0.0**	**2**	**3.0**	**2**	**1.1**
All primary headaches	**114**	**100.0**	**67**	**100.0**	**181**	**100.0**

About 63 (34.8%) of primary headache patients were found to miss work days during the headache attacks. Seventy seven (42.5%) of all primary headache patients were found to have a family history of headache.

The mean onset of migraine headache in age was 21.5 ±10.5 with a range of 6-44 years in females and 22.7±12.0 with a range of 10-53 years in males. Mean years of life lived suffering form migraine was 27.3 ±12.0 with a range of 4-50 years in females and 26.0 ± 11.6 with a range of 2-47 years in males.

The clinical characteristics and profiles of the patients with migraine headache have been summarized in Table 3 and Figure 1.

The main triggering factors of migraine headache attacks were annoyance or stress in 33 (48.6%) good or bad smell in 29 (42.6%), weather change in 27(39.7%), exhaustion in 21 (38.8%) alcohol intake in 17 (25.0%). These were followed by the less common triggering factors of cigarette smoking in 7 (10.3%), menstruation in women in 6 (8.8%) change of sleeping pattern in 4 (5.9%) and fasting or missing meals in 3 (4.4%); (Figure 1).

Table 3: **Clinical and profiles of migraine headache among Workers of Akaki Textile Mill, Addis Ababa, 2008 to 2009 (No=68)**

Variables	No	%
Symptoms, site and character of migraine headache		
Phonophobia	60	88.2
Nausea / vomiting	56	82.3
Photophobia	51	75.0
Tearing eyes	17	25.0
Red eyes	14	20.6
Unilateral	52	76.5
Periorbital	26	38.2
Bilateral	16	23.5
Forehead	18	26.5
Temple	15	22.0
Throbbing / pulsatile	59	86.8
Excruciating	3	4.4
Splitting	3	4.4
Dull aching	3	4.4
Moderate headache	31	45.6
Severe headache	37	54.4
Family history of migraine	48	70.6
Children	19	27.9
Father	13	19.1
Brother /sister	11	16.2
Mother	5	7.4
Frequency of headache less or once a month	25	36.7
Frequency of headache twice or more a month	43	63.2
Aggravated by physical activity	63	92.6
Relived by rest or lying down	58	85.3
Sensory aura	10	14.8
Visual aura	5	7.4
Dysphasic speech aura	1	1.5
Attack duration of headache 4-12 hours	18	26.4
Attack duration of headache 13-24 hours	14	20.6
Attack duration of headache 25-74 hours	36	53.0
Headache starts at day time only	19	27.9
Headache starts at day and night	49	72.1
Headache awakens at night	38	55.9

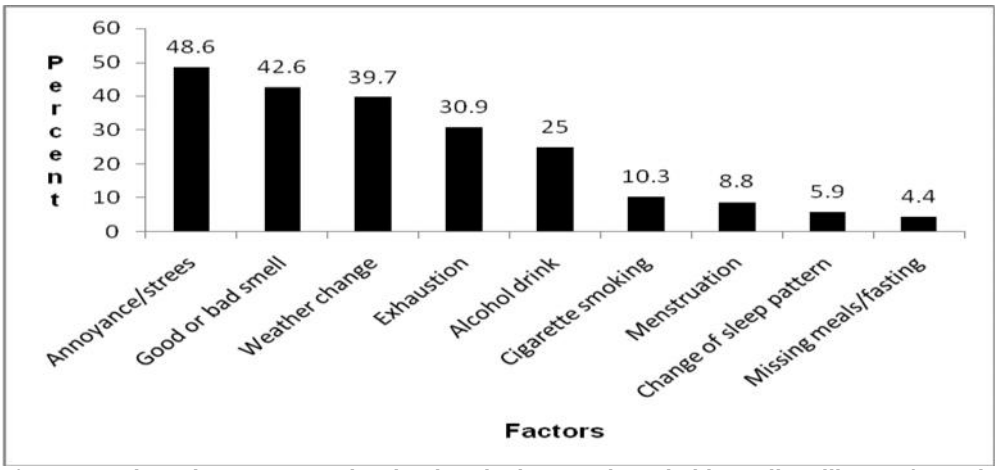

Figure 1: **Triggering Factors migraine headache attacks, Akaki Textile Mill, 2008/2009 (No. 68)**

Phonophobia in 60 (88.2%), nausea or vomiting in 56 (82.3%), photophobia in 51 (75%) and tearing eyes in 17 (25%) were the commonly associated symptoms for migraine. Fifty two (76.5%) of the patients had unilateral headache, the common sites of the pain being periorbital in 26 (38.2%) and forehead in 18 (26.5%). The commonest type of pain was the pulsatile or throbbing type in 59 (86.8%). The headache attacks were severe in 37 (54.4%) and moderate in 31 (45.6%) of the migraineurs (Table 3).

Family history of migraine headache was obtained in 48 (44%) of the cases. The average frequency of migraine headache was twice or more in a month accounting for 43 (63.2%) and less or once a month for 25 (36.7%) of the sufferers. Migraine attack was aggravated by physical activity in 63 (92.8%) and relived by lying down or rest in 58 (85.3%). Among migraine victims with aura the common aura was sensory followed by visual aura. The average durations of each attack of migraine headache lasted 25 to 75 hours in 36 (53%) followed by 4 to 12 hours in 18 (26.4%) and 13 to 24 hours in 14 (20.6%) of the patients. The attack of headache began during the day and night time in 49 (72.1%) and day time only in 19 (27.9%) and in 38 (55.9%) of the sufferers, the pain awakened them from sleep at night (Table 3).

The mean years of onset of tension headache was 28.2 $\pm$ 13.0 with a range of 8-55 years in females and 26.7 $\pm$ 10.8 with a range of 5-50 years in males. The mean years of life lived suffering from tension headache was 18.5 $\pm$ 11.5 with a range of 1-48 years in females and 20.5 $\pm$ 12.2 with a range 2-43 years in males.

The clinical characteristics, profiles and triggering factors of tension type headaches have been summarized in Table 4 and Figure 2.

Table 4: **Clinical profile of tension headache among Workers of Akaki Textile Mill, Ethiopia, 2008 to 2009 (No=109)**

Variables	No	%
Site, type, severity & symptoms of headache		
Bilateral	**98**	**89.9**
Forehead	**58**	**53.2**
Temple	**22**	**20.2**
Top of head	**14**	**12.8**
Periorbital	**8**	**7.3**
Pressure or tightness-band like	**91**	**83.5**
Dull	**17**	**15.6**
Mild	**65**	**59.6**
Moderate	**44**	**40.4**
Anorexia	**68**	**63.0**
Phonophobia	**34**	**31.5**
Photophobia	**13**	**11.9**
Family history of headache	**44**	**40.4**
Relived by rest/lying down	**51**	**46.8**
Headache awakens at night	**30**	**27.5**
Headache starts at day time only	**49**	**44.9**
Headache starts both day and night	**60**	**55.1**
Duration headache during attack		
Less than12 hours	**34**	**31.2**
12-72 hours	**35**	**32.1**
More than 72 hours	**40**	**36.7**
Average frequency of headache		
Less or once a month	**51**	**46.8**
Twice or more a month	**39**	**35.8**
$\geq$ 15 days a month for 3 months	**19**	**17.5**

A total of 109 patients were found to be having tension headache, 98 (89.9%) had bilateral headache, 58 (53.2%) localized to the forehead, 91 (83.5%) had band like pressure or tightness, 65 (59.6%) mild and 44 (40.4%) moderate headache attacks.

The symptoms precedent the headache attack were anorexia in 68 (63%), followed by phonophobia in 34 (31.5%) or photophobia in 13 (11.9%) but not both in the same patient. Family history of headache was found in 44 (40.4%) of the tension headache patients. The reliving factor of the pain was resting or lying down in 51 (46.8%) of cases, and the attacks begin at day and night time in 60 (55.1%) or day time only in 49 (35.9%). The headache was strong enough to awaken from sleep at night in 30 (27.5%) of the cases. The average duration of each attack of headache was more than 72 hours in 40 (36.7%), from 12 and 72 hours in 35 (32.1%) and less than 12 hours in 34 (31.2%). The average frequency of the tension headache attacks were less or once a month in 51 (46.8%), twice or more a month in 39 (35.8%) and 15 days or more for at least three months (chronic tension type headache) in 19 (17.5%).

The main triggering factors of tension headache attacks were annoyance or stress in 55 (50.5%), change of

weather in 24 (21.9%) smell in 21(19.0%) and exhaustion in 18 (16.5%), The less commonly triggering factors were change of sleep pattern in 6 (5.6%), menstruation in women in 3 (2.8%), fasting or missing meals in 3 (2.8%) and cigarette smoking in 1 (0.9%)

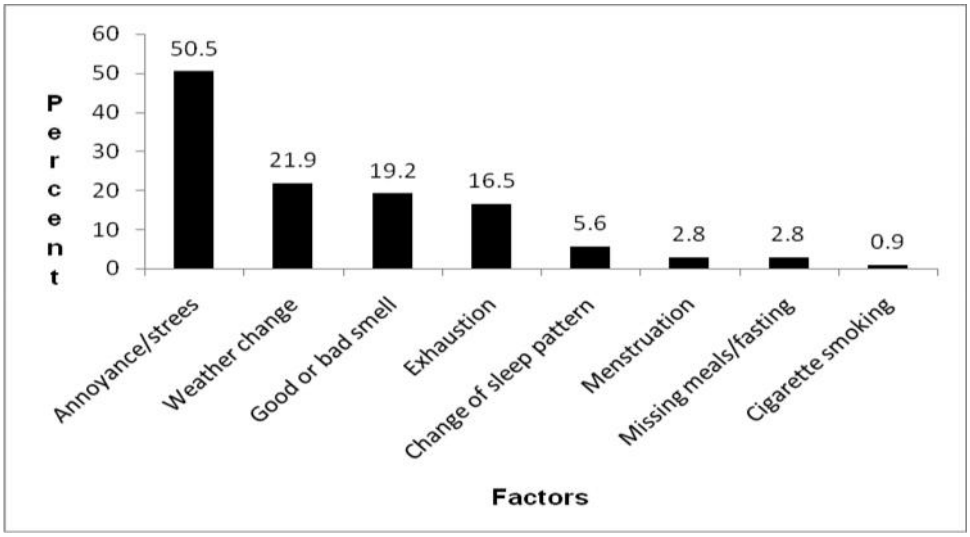

Figure 2: **Triggering factors of tension type headache attacks, Akaki Textile Mill, 2008/2009 (No=109)**

Discussion

About 85% of primary headache sufferers were below 55 years, in the productive years of age in this study. The lost productivity costs, the humanitarian burden of headache pain and suffering, lifestyle compromises, damaged relationships, and lost opportunities are huge to the individual, family members and society. Yet the reality is that, for the vast majority of those whose quality of life is spoiled by headache, effective treatment requires no expensive equipment, test or specialists. The essential components of effective medical management are awareness of the problem, correct diagnosis and recognition with the help of international headache society diagnostic criteria, avoidance of mismanagement, appropriate life style modifications and informed use of cost-effective pharmaceutical remedies for both abortive and preventive therapies of headache attacks (12, 13).

Prevalence rates, diagnostic criteria, and clinical pearls or clues can be used to facilitate accurate diagnosis (14). The correct diagnosis and treatment can mitigate these burdens, but incorrect treatment both adds to the burdens and wastes resources (15).

Out of 181 primary headache patients diagnosed by the international headache society diagnostic criteria 60% were tension headache, 38% migraine and 2% were cluster headache and other trigeminal autonomic cephalalgias and the rare cases of other primary headaches were not found in this study. This is in agreement with the international classification that the four types of primary headaches include tension-type headache, migraine, cluster headache and other trigeminal autonomic cephalalgias, and other primary headaches (16).

From the most frequent to the least types of tension type headache in this study were frequent episodic tension in 26%, infrequent episodic tension type in 22%, chronic tension type in 11% and probable tension type in 2%. Chronic tension type headache is the most disabling headache as the patient is in pain for more than half a month for at least three months.

Migraineurs were classified as migraine without aura in 28%, migraine with aura in 9% and probable migraine in less than 1%, there was no case of chronic migraine headache in this study.

All these primary headaches were significantly more common in females except cluster headache which is highly preponderant in males.

The findings of primary headaches and sex preponderance in this study are in agreement with several previous studies in the world, Africa and Ethiopia (17-24). Migraine is a predominantly female disorder and usually starts after menarche, occurs more frequently in the days just before or during menstruation, and ameliorates during pregnancy and menopause. These variations are mediated by fluctuation of estrogen levels through their influence on cellular excitability or cerebral vasculature (25).

The female to male ratio was almost similar in this study for migraine and tension headaches 1.7 vs. 1.8, respectively. This is slightly different from the 2000 large population based study of Norway in which it was 2.1 vs 1.4 (21) but similar to the 2000 WHO report (3).

Migraine in families or relatives was 44% in this study, which is not far from the previous study in the rural

community in this country (19) and similar to the 2009 Pakistan study in which it was 45% (26). But this is lower than the71% of 2012 Turkey study among medical students (27). In this study 63% of the sufferers of migraine had twice or more attacks per month, which is similar to the 1995 Ethiopian study in Meskan and Marko, which was 66% (19).

The headache attacks were severe in 54% and moderate in 46% in this study. This is lower than the 2004 door-to door rural study of south Tanzania, in which severe and very severe migraine attacks were recorded in more than 77% (12). But in the 2012 Turkey study, the severe attacks were in 55% and moderate attacks in 39% nearly the same as in this study (28).

Precipitating or triggering factors for episodes in this study were stress in 47% and 51%, smell 43% and 19%, weather change 40% and 23%, and exhaustion 39% and 17% for migraine and tension headaches, respectively. Similar patterns and figures with a slight difference were seen in the 2000 Hong Kong study (20). Although similar in pattern, the actual figures are lower than the 1995 rural study in Ethiopia, in which it was 90% for stress, 70% for smell 78% for change of weather, 75% for physical strain (exhaustion) and 46% for different alcoholic beverages (19). The reasons for these differences might be several: The study design and set up (rural versus urban), time of the study (1995 and 2008/9) and entirely of different populations (community versus factory workers), to mention some of the reasons. The 2009 rural community study of south Benin showed similar patterns of migraine triggering factors to this study. The factors were annoyance in 73%, exposure to sun in 73%, physical activity in 65%, heat in 65%, anxiety in 51%, sleep disturbance in 51% and menstruation in 14% (29).

The most frequently encountered migraine symptoms in this study were phonophobia (88%), throbbing pain (87%), nausea (82%), unilateral pain (77%), and photophobia (75%). These symptom figures were 76%, 85%, 73%, 59%, and 80%, respectively in the American 2001 migraine study (23). This shows similar clinical features distribution both in the west and in this study. A community-based 1995 study in Dar Salaam; Tanzania, showed the clinical manifestations of primary headaches to be similar to those observed in the developed world and as well to those in this study (30). In the 2012 nationwide community-based study of Turkey, these migraine symptoms were phonophobia in 85%, photophobia in 83%, throbbing or pulsatile pain in 82%, nausea or vomiting in 81% and unilateral pain in 55% (28).

The triggering factors of tension headache attacks were annoyance or stress in 51%, change of weather in 22% smell in 19% and exhaustion 17%. In a 2012 Malaysian study, common triggering factors were sun exposure, sleep deprivation, weather and stress (31).

The clinical features of tension headache in this study were band like pressure or tightness found in 84%, bilateral ache in 89%, pain localized to the forehead in 53%. Mild intensity of headache in 60% and moderate in 40% and family history of headache were found in 40% of the sufferers in this study. The clinical features of tension type headache comprises headache attacks with mild to moderate pain intensity and is often described as having a pressing or tightening (non-pulsating) quality or as a band extending bilaterally back from the forehead across the sides of the head to the occipital and may extend to the posterior neck muscles, not aggravated by physical activity such as walking or climbing stairs. The pain lasts for at least several hours to days and is predominantly felt bilaterally (12, 32). The site of the pain was bilateral in 88% of the patient in the 2012 Indian study which is the same with our findings (33) The family history of tension headache in this study is higher than the in 2011 Chinese study, which was 25% (2).

The long average years lived with headache, the high frequency of headache attacks, the coming on at day or night causing wakening up from sleep and mild to moderate pain in tension and moderate to severe pain in migraine headache all compromised the quality of life of the sufferers significantly in this study. This is similar to studies elsewhere (24, 34, 35).

In conclusion**,** classification, clinical profiles and triggering factors help in the diagnosis of primary headaches. Community-based well designed study representing the whole nation, rural and urban, is recommended,

As the study was done among factory workers, the results of the study may not be extrapolated to the general population.

Acknowledgements

I would like to extend my heart felt gratitude to Prof. Redda Teklehaimanot for his invaluable advice and management team and health workers of the Akaki Textile Mill for allowing and helping in organizing the data collection. I would also like to thank the participants of the study, without which this study would not have materialized.

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