

Headache Care, Research, and Education Worldwide

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Introduction

It is well established that headache disorders are common and cause significant disability but they still continue to be under-diagnosed and under-treated. Primary headaches are more chronic, complex, and contribute largely to the burden of headache. Among all headache disorders, probably because of its disabling nature, migraine has received the most attention and is well established as the main cause of headache burden worldwide. Other primary headaches may be more common, but population-based data on their prevalence are not well-documented. Migraine prevalence and management strategies differ across regions of the world depending on factors such as genes, geography, environment, culture, and lifestyle. Furthermore, owing to differences in level of awareness, attitude, interest, and focus, the burden of headache varies across regions of the world.

With the aim of addressing the burden of headache worldwide, in 2004, three major international headache organizations—the World Headache Alliance (WHA), the International Headache Society (IHS), and the European Headache Federation (EHF) collaborated with the World Health Organization (WHO) to launch the ‘Global Campaign to Reduce the Burden of Headache Worldwide’ (LTB Campaign).¹ The details of this seven-step campaign have been outlined by Steiner in his commentary on the Global Campaign. One of the key steps in the LTB campaign is to establish a worldwide observatory of headache to obtain a clear and objective understanding of the scale and scope of headache related burden across the globe.¹

The present chapter discusses factors that affect the burden of headache from the South-East Asia region and highlights several regional factors that have an influence on the worldwide burden of headache. The aim of this chapter is to appraise the international headache community and the policy-developers of the LTB global campaign of these additional ‘Barriers to Care’ in this region. It also emphasizes the need for adoption of region-specific guidelines to reduce the burden of headache worldwide. With a focus on India, which has the second largest population in the world and the highest in the South-East Asia region, the differences in regional epidemiology, clinical presentations, and public health challenges have been outlined.

The South-East Asia region

All WHO Member countries belong to one of six regions: Africa, the Americas, South-East Asia, the Eastern Mediterranean region, Europe, and the Western Pacific. Every region of the WHO includes countries at different degrees of development and no region is homogeneous in terms of race, religion, political, and cultural organization. The 11-member countries that are included in the South-East Asia region (SEAR) of the WHO are Bangladesh, Bhutan, Democratic People's Republic (DPR) of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste. The Regional Office for the South-East Asia region (SEARO) is located in New Delhi (India). Of the member countries, India, Indonesia, Bangladesh, Thailand, and Myanmar have populations more than 25 million. Data on factors relevant to the burden of headache from each of these countries have been compared (Table 3.1).

Regional epidemiology

Burden of headache ideally refers to both migraine and non-migraine headache but the burden on account of migraine is better documented than that owing to tension-type headache, the chronic daily headache syndromes, and cluster headache. The term 'burden of headache' as it is used in this article therefore refers to the burden of migraine. To be able to evaluate the global burden of headache, we need population-based data on headache prevalence from different regions of the world. There are many epidemiological studies on headache from North America and Western Europe, but nearly half the world's population lives in regions where headache prevalence and burden have not been studied. Studies from some of these regions have shown methodological flaws and are more likely clinic-based. For a comparative study that looks at all available population-based evidence on the worldwide prevalence of headache disorders, the reader is referred to Stovner's review on the global burden of headache.² Out of a total of 107 studies, 20 were from Asia, and of these only 4 were from the South-East Asia region.

Of all studies from the South-East Asia region, there was only one study by Roh et al.³ from South Korea that was population-based and used the criteria of the International Headache Society. This study showed that the prevalence of migraine was not lower than in western countries and much higher than previous studies conducted from the Asian region. Because studies from China and Hong Kong were done without using the classification criteria they showed lower migraine prevalence rates than those seen in western countries and also based on the study by Stewart et al.⁴ who reported that the prevalence of migraine in Asian-Americans was 50% to 60% of that seen in Caucasians. It has always been thought that migraine prevalence is low in Asia. To establish the real picture, it is therefore necessary to have more population-based epidemiological studies from this region using the standard design.

There have been a number of clinic-based studies from the South-East Asia region that have looked at clinical presentations that are different from what is usually seen in the west. In a study of 1000 patients Ravishankar⁵ found a low incidence of migraine with

aura and also medication overuse headache. Chakravarty⁶ found that Chronic Daily Headache (CDH) although not uncommon in India was still relatively unexplored. There was a paucity of patients with chronic tension-type headache, there was less analgesic overuse, and the average dose of analgesic implicated in CDH was much less than that reported in the west. Based on these findings, the author has raised the question whether there could be a genetic difference in the opioid pathway response to analgesic consumption.

From a clinic-based retrospective study of cluster headache patients, Chakravarty et al.⁷ concluded that cluster headache and other trigemino-autonomic cephalgias were uncommon in India. Variant forms of cluster headache were seen with no seasonal variation and only three cases of paroxysmal hemicrania and one case of Short-lasting Unilateral Neuralgiform Headache attacks with Conjunctival Injection and Teething (SUNCT) syndrome were seen over a 17-year period. Ravishankar⁸ from an analysis of 70 patients found that during the acute attack, 84% had mixed features of both cluster headache and migraine, and 16% had features of both entities but at different points in time. Gupta et al.⁹ found 73.1% of migraine subjects had cranial autonomic symptoms. There have been reports of variations in clinical presentation from other Asian countries in the Western Pacific region of the WHO that are not included here.

Barriers to care

The parameters that affect the burden of headache differ regionally. The two leading causes for an increased headache burden in the South-East Asia region are (1) the population overload and (2) the presence of other health priorities that are overwhelming and difficult to control. Factors such as low-income levels, the urban/rural distribution ratio, adult literacy rates, health-care expenditure, and the doctor/population ratio for the SEAR countries have been compared (Table 3.1). Although many factors are common across the region, there are differences between countries with some factors having a greater impact than others. Overpopulation, low literacy levels and low income are striking factors in populous countries such as India and Bangladesh. But Indonesia, Thailand, and South Korea have higher literacy levels and lower poverty levels. The pattern of the health-care system also differs between countries. None of these countries from the South-East Asia region has looked at headache as a public health problem that needs to be addressed now or in the near future.

India, with a population of 1100 million is the second most populous country in the world and has 16% of the world population. The country is divided into 25 states with each state speaking a different language, and there are 10 practiced religions. This diversity has a significant contribution to the way headache and migraine are understood and managed. Low-income, low-literacy levels particularly in the villages, financial constraints, and other health priorities make headache disorders seem unimportant. More than 350 million are still below the poverty line; 75% of the population lives in villages with poor infrastructural facilities; and paradoxically 75% of the doctors live in cities. Low-literacy levels lead to low awareness, myths and misunderstandings, and faulty attitude towards headaches in general. Fear of allopathic medicines and easy availability

Table 3.1 Factors that impact the burden of headache: country-specific data from the South-East Asia region

Details	Bangladesh	Bhutan	DPR Korea	India	Indonesia	Maldives	Myanmar	Nepal	Sri Lanka	Thailand	Timor-Leste
Total population (in millions)	140	0.63	23.6	1097	222.05	0.30	55.4	25.8	19.67	62.8	0.11
Urban population (%)	31	31	60	28	48	35	30	14	15	33	15
Rural population (%)	69	69	40	72	52	65	70	86	85	67	85
Gross National Income per capita (US\$)	470	1235	—	720	1280	2390	≤875	270	1160	2750	729
Population below poverty line (Intl.\$1/Day) (%)	36	32	—	34.7	7	<1	26.6	24.1	23	3.5	20
Adult literacy rate >15 years (%)	50	59.5	100	61	91	96.3	92	49	90	96	43
Health expenditure (% of GDP)	3.4	3.1	6.3	4.8	2.8	6.2	2.8	5.3	3.5	3.5	9.6
Private expenditure (%)	69	16	0.4	75	66	11	81	72	55	36.6	24
Public expenditure (%)	31	84	99.6	25	34	89	19	28	45	63.4	76
Health expenditure per capita (US\$)	14	10	34	27	33	136	394	12	31	76	39
Doctors/10,000 population	3	2	32	7	2	13	3	2	6	3	2.5

Source link: http://www.searo.who.int/LinkFiles/Country_Health_System_Profile_11health-questions.pdf

Table 3.2 Public health challenges to reduce the 'burden of headache' in the South-East Asia region

Barriers to care	Efforts that will be needed
Low awareness of headache disorders	Education for the lay and medical
Faulty attitude to headache	Population-based epidemiological data
Large rural population	Estimation of direct + indirect costs
Urban overcrowding	Addressing financial constraints
Low literacy levels	Health-care system modification
Financial constraints	Improving literacy
Health-care system drawbacks	Improving rural infrastructure
Other health priorities	Addressing other health priorities
Alternative treatment modalities	Influencing insurance agencies
Triggers peculiar to the region	Impacting on the government

of alternative treatment options that are ineffective contribute to the burden in this region. Financial constraints lead to poor compliance. Factors that can be 'barriers to care' in this region¹⁰ have been listed in Table 3.2.

Compounding the regional burden of headache further are some migraine triggers that are peculiar to the region.¹¹ Being in the tropics, heat and light levels are very different from what prevails in the temperate countries and travel conditions are not ideal. Hair-wash leading to migraine headache in some is a trigger that is peculiar to India.¹² There are many religion-based fasting habits that are different. Unlike in the western world, chocolate, cheese, and red wine are not common triggers in the South-East Asia region.¹²

Public health challenges

There are many public health challenges in the South-East Asia region that need to be addressed when dealing with the burden of headache. There is a dire need for good population-based epidemiological data. Lack of awareness of headache disability and faulty attitudes cause delay in seeking proper headache treatment. The lay population needs to be better informed and primary care physicians who treat headaches need to be better educated. Children with headache do not often receive the correct diagnosis. It is difficult to introduce the practice of maintaining a headache diary and because of poor recall it is difficult to rate disability using the MIDAS scale.

The health-care system needs to acknowledge and address headache as a crucial public health issue. Unfortunately owing to the presence of other infectious and non-infectious health concerns that are more visible disorders, headache disability is relegated to the background. The pattern of the health-care system in most countries in the SEAR is a combination of public and private care. Lack of managed care facilities and financial constraints make it difficult for many in the population to seek private health care and so they resort to self-medication or try alternative therapies. Most of the rural

population tries alternative methods of treatment such as Homeopathy, Unani, Ayurveda, Acupressure, and Acupuncture. Unqualified professionals and local chemists are the first point of halt for many headache patients. Government authorities need to understand the disability associated with headache.

In summary, the following efforts will help reduce the burden of headache in the South-East Asia region:

1. Epidemiological studies that are population-based.
2. Education to promote headache awareness among the public and headache knowledge among primary care physicians.
3. Revision of the medical curriculum to include teaching on headache disorders.
4. Recognition of migraine as a valid biological disorder in adults as well as children.
5. Educating insurance agencies and health-care providers on the disability status of chronic headache and the need for continued treatment.
6. Modification of the health-care system to address the needs of headache patients.
7. Influencing government authorities to address not just the life threatening but also life-long illnesses that affect productivity and functional quality of life.
8. Developing methods to monitor parameters that evaluate the direct and indirect costs of headache.

Conclusion

Faced with a population overload and numerous other pressing health problems, headache gets very low priority in the South-East Asia region. It is not addressed ideally in either the private or public health-care system. To reduce the burden of headache in this region it is important that we understand the regional barriers that are different. Most importantly, we need governmental authorities and insurance agencies to look at headache disorders differently and to provide greater resources for headache treatment. Improving awareness of headache disorders, education of physicians, and modifications to the health-care system need top priority.

The LTB global campaign has rightly targeted areas of the world where large gaps exist between theory and practice. This augurs well for the South-East Asia region. Correct implementation of the strategies mentioned earlier should hopefully bring headache into focus as a burdensome disorder that needs to be addressed in future health plans.

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