

VIEWS & REVIEWS

Cultural belief system and headache

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Abstract

There is wide variation in the attributed precipitating causes of headache in the medical literature. Such variations are difficult to be completely accounted for by known physical and biological factors. In fact, some of the headaches described are peculiar to certain cultures and geographical regions. A review of the placebo-controlled studies on "chocolate headache" showed that belief system itself is enough to precipitate headache without any properties intrinsic to the provoking factors. Many of the headaches peculiar to certain cultures and regions may thus be understood in this way, being due to the cultural belief system. Examples of such headaches are: headache from sun exposure, wearing of headscarves, eating of "heaty food" in Malaysia, witchcraft in Zimbabwe, sauna bath in Finland, and perhaps consuming chocolate and citrus fruits in the West.

Key words: headache, culture

Other than stress, emotion, menstruation and sleep deprivation, there is wide variation in the attributed precipitating factors of headache in the literature, particularly the roles of temperature and food.¹⁻⁷ Selby and Lance, in a report of 500 cases of migraine and vascular headache from Sydney, reported glare as a precipitating cause in 47% of patients, and food in 25%. The food commonly implicated were: fats, fried foods, chocolates, and oranges, as well as tomatoes, pineapples, and onions occasionally.¹ Moffat et al surveyed the dietary factors precipitating migraine in 332 subjects. Spirits, fortified wines and wines were incriminated in two-thirds of instances, beer and citrus fruits in a third each, chocolate in a quarter and cheese in a tenth of the respondents.² Nikiforow & Hokkanen, reporting from a community based study of headache in Finland, reported that sauna bath was the second most important provoking factor of headache seen in 22% of the women and 12% of men. Furthermore, 30% of the headache sufferers reported seasonal headaches, but the distribution was equal throughout the year, with no accumulation related to the differences in the length of daylight between winter and summer in the north of Finland. Food on the other hand, was thought to provoke headache only in 4% of headache sufferers.³ Levy reported from an epidemiological survey in Zimbabwe with 589 headache sufferers. The precipitating factors mentioned were: heat (26%), witchcraft (11%), alcohol (12%), exercise (2.4%) and food (1.2%).⁴ D'Alessandro et al reported from a community

survey in the Republic of San Marino, near the Adriatic Coast within Italy. Particular foods or drinks, i.e., cheese, chocolate and tea were blamed for provoking severe headache in 32% of men and 29% of women; alcohol for 12% of men and 7% of women. In this republic with Mediterranean climate, sun and weather was not mentioned as provoking factor for headache.⁵ Zhao et al reported from a community-based survey of migraine in 21 provinces of China. Change of weather was thought to be trigger factor in 30%, and special food in 3%.⁶

Similar wide variations were seen in the Malaysian studies. In a community survey based on 595 normal subjects in urban and rural Malaysia, exposure to sun was said to be the main triggering factor for migraine (52%) and tension headache (56%).⁷ This is seen in all major racial groups, including 25% of the respondents who were ethnic Chinese. A clinical study by another Malaysian group, Haniffah & Win from the northern state of Kelantan also mentioned excessive heat and hot weather as an important triggering factor for migraine.⁸ The author conducted a survey among neurologists who practices among Chinese in various parts of the world (Beijing, Hong Kong, Inner Mongolia, Hong Kong and Sichuan in China, Kaoshiung and Taipei in Taiwan) and found such a concept not prevalent elsewhere. However, some of the Chinese elsewhere complain of headache being precipitated by weather change, whether it is from cold to hot or vice versa, and windy weather. In the author's practice in Kuala Lumpur, close

to a quarter of the headache patients complained of the pain triggered by eating "heaty" (re) food such as mutton, fried and spicy food. This is particularly so among the ethnic Chinese. However, a similar concept is not seen when a specific enquiry was made to neurologists who practice among ethnic Chinese elsewhere in the world. In Kelantan, Malaysia where the residents are mainly Muslims, wearing of headscarves (tudung) is a common custom. Haniffah and Win also identified wearing of headscarves as the triggering factor for migraine seen in 37% of women.⁸ It is interesting to note that although wearing of headscarves is also common among the Muslim women in Kuala Lumpur, wearing of headscarves is not a triggering factor for headache in Kuala Lumpur where the author practices.

It is unlikely that the differences in physical environment and biological factors explain fully such a wide variation in the prevalence of provoking factors for headache. For example, although Malaysia has a tropical climate where the temperature throughout the year in degree Celsius to be around mid-twenties to early thirties, the long summer days in Beijing can be even hotter, with the air-conditioning facilities much less commonly available, yet sun is not recognised as triggering factor for headache in the later. As for food, it may be consumed widely geographically, yet it is recognised to provoke headache only in some areas. In particular, citrus fruits, tomatoes and onion were identified as provoking factors in Sydney and London^{1,2}, and mutton and spices as provoking factors in Malaysia.⁷ Vast differences in the rate of alcohol as provoking factor was also seen in the various countries where alcohol consumption was common, from London (70%), San Marino (30%) to Finland (3%). Similarly, it would be difficult to attribute any physical or biological differences between the Kelantan and Kuala Lumpur Muslim women, both of whom wear headscarves, yet only the Muslim women in the former complain that it is able to provoke headache.

As all these studies were based on patients' self assessment, which is dependent on patients' own belief of what can or cannot provoke headache, the patients may have wrongly attributed the headache to some irrelevant factors. In fact, blinded placebo-controlled studies with placebo on the provoking factors of headache is uncommon in the medical literature. Although foods were mentioned as important provoking factors for headache particularly in the studies

from Sydney, London and Republic of San Marino,^{1,2,5} placebo-controlled studies have not been consistently supportive of foods as an important provoking factors. In the case of chocolate, the results of the studies have been conflicting.^{2,9,10} A study on tyramine which may account for cheese provoked headache was also negative.¹¹ McQueen et al did a controlled trial of dietary modification in migraine, concluding that dietary management of migraine is of little, if any value.¹² Littlewood et al showed that migraine attack occurred in 9 of 11 red wine drinkers, but none of the 8 who drank vodka, arguing against alcohol itself as a trigger for alcohol provoked headache.¹³ Not every physical factor that the patients identified as trigger factor can be subjected to vigorous examination by placebo-controlled studies. Intercultural studies may thus be useful in assessing the validity of such claim.

On the other hand, the belief system by itself seems to influence the cause of headache. Wolff and Moffat et al conducted placebo-controlled study on chocolate as provoking factor for migraine.^{9,2} Wolff described that all his study subjects were able physicians, experienced in study methods, "they were of the opinion that they could predictably produce migraine headache by themselves by eating chocolate in any form and in minimal amounts". Moffat et al also mentioned that all their study subjects "had noticed that they were unable to eat even small quantities of chocolate or other cocoa products without suffering headache". Yet when subjected to a study, there was no clear relationship between the occurrence of headache and consumption of chocolate and placebo, chocolate as a provoking factor for migraine could not be confirmed. The explanation for the study subjects who described that they could predictably produce headache in any form and in minimal amounts was thus not in the physical properties of the chocolate itself, but within the study subjects, in their belief that chocolate is able to trigger their headaches. The idea of the power of suggestion is not new in medicine. In the well established concept of placebo, a belief system itself is able to relieve physical symptoms. In the case of chocolate headache, the "neutral" agent is able to provoke rather than relieve the symptom. However, the underlying feature is the same, that of the power of suggestion from patients' concepts and believes. Similarly in epidemic hysteria, other than fainting and dizziness, patients may also complain of vivid visual and auditory hallucinations which relate to the patient's

cultural background.¹⁴

The headache attributed to sun exposure, the wearing of headscarves among Muslim women, and eating of food such as mutton, fried food, spicy food and durian in Malaysia may thus be attributed to cultural beliefs, i.e., headache from "heatiness". Belief systems may also be the explanation of other attributed causes of headache, such as chocolate, citrus fruits, fats, pineapples, onions which has been reported mainly from the Western populations. The cultural belief system as a cause of headache may partly explain the wide variations in the precipitating causes of headache in the literature.

Culture plays a significant role in the understanding of causation of headache. Culture-bound syndrome is used to denote recurrent, locality-specific patterns of aberrant behaviour and troubling experiences that appear to fall outside conventional Western psychiatric categories. Examples seen in Southeast Asia are amok, koro and latah.¹⁵ The term may however be used more broadly. According to Konnec, the "so-called culture-bound or culture-specific syndromes should be referred to as syndromes usually found in one or more particular cultural settings. Thus, the disorder may not only have a label, social construction, explanation, or even a mental content that is culturally unique (which is true of virtually every diagnosis defined by any society), but it is so bound up with its cultural meaning that it would not exist (would be something else) in the absence of the particular cultural framework".¹⁶ When used in this more inclusive sense, anorexia nervosa is an illness particularly evoked by particular cultural conditions affecting body image and self-expectation. It is so strongly culturally constructed and subject to spread through psychocultural communication that it may be included in this diagnostic category, though the condition is more prevalent in West. The various forms of headache which are culture specific may also fall into this diagnostic category, such as headache from sun exposure, wearing headscarves (tudung), consuming "heaty food" in Malaysia,^{7,8,17} witchcraft in Zimbabwe,⁴ sauna bath in Finland,³ and perhaps consuming chocolate, oranges, tomatoes, pineapples and onions in Sydney and London.^{1,2}

Management of headache should therefore also be viewed in this cultural perspective. As the aetiology of the symptom is so strongly related to culturally held beliefs, for effective management, it would not be enough to treat an individual patient, the role of physicians should

also be to educate and change the beliefs of the community. In the study of the health seeking behaviour of the local patients,¹⁸ it would not be complete unless the non-conventional measures used by the patients arising from the peculiar cultural beliefs are included. In the context of Malaysia, it would mean diet modifications and food supplements (jinbu) which mainly consists of herbs to modify "heatiness" (re) and "weakness" (xu) to attain health. The latter being often practised over a long period of time, thus may constitute a substantial sum of money.

Cultural factors may be important in the aetiology and management of headache in another way. Different cultures adopt different attitudes to pain. Some may be more stoic, where aches and pains are regarded as part of normal life, tolerance to pain is a virtue and chronic use of drug is not viewed favourably. On the other hand, in other cultures, pain may be regarded as evil which is incompatible with modern civilisation and should be rid of at all cost. If analgesic abuse is an important etiologic factor in chronic daily headache,^{19,20} the prevalence of chronic daily headache would be expected to be low in the societies that have high tolerance to pain but high in societies that have low tolerance to pain.

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