



REFUGEE STRESS AND FOLK BELIEF: HMONG SUDDEN DEATHS

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Abstract—Since the first reported death in 1977, scores of seemingly healthy Hmong refugees have died mysteriously and without warning from what has come to be known as Sudden Unexpected Nocturnal Death Syndrome (SUNDS). To date medical research has provided no adequate explanation for these sudden deaths. This study is an investigation into the changing impact of traditional beliefs as they manifest during the stress of traumatic relocation. In Stockton, California, 118 Hmong men and women were interviewed regarding their awareness of and personal experience with a traditional nocturnal spirit encounter. An analysis of this data reveals that the supranormal attack acts as a trigger for Hmong SUNDS.

Key words—refugee stress, sudden death, ethnomedical pathogenesis

With the fall of the capital city of Vientiane in 1975, thousands of Hmong fled their native Laos and—often after extended delays in Thai refugee camps—began arriving in the United States. The Hmong are more widely known in the West than other Laotian ethnic groups because of their efforts on behalf of the United States during the war in Viet Nam, particularly after it spread to Laos and Cambodia. Thousands of Hmong were funded directly and secretly by the Central Intelligence Agency to combat the Communist Pathet Lao. Hmong men served as soldiers, pilots, and navigators, and their familiarity with the mountain terrain helped make them remarkable scouts and guerrilla fighters [1]. By the end of the civil war, the Hmong had suffered casualty rates proportionally ten times higher than those of Americans who fought in Viet Nam [2]; it is estimated that nearly one-third of the Laotian Hmong population lost their lives [1]. When the Laotian government changed hands after the departure of American troops, large groups of Hmong were forced to flee Laos rather than chance “re-education” camps or possible death under the new Communist regime.

There are currently over 110,000 Hmong living in the United States, with 70,000 in California’s Central Valley alone [3]. The city of Fresno is now home to the largest single community of Hmong in existence. The relocation of this large number of refugees from Laos to the United States has been characterized by extraordinary difficulties.

These displaced and resettled Hmong, while finding welcome freedom from persecution and physical annihilation, are nevertheless going through a grave cultural crisis, immersed as they are, an infinitesimal minority, in overwhelmingly dominant majority modes of living, norms of behavior, beliefs and values. Everywhere they face the possibility of cultural annihilation, and struggle to maintain.

for themselves and their children, a clear idea of who they are, of their identity as Hmong, of their place in history and in the cosmic realm of spirits, ancestors’ souls and human societies [4].

The Hmong who have fled Laos leave behind them a homeland ravaged by war, but in their transition to the West they are met with new and unique problems. Those Hmong who have come to the United States find themselves suspended between worlds, in a place where their religion, language and skills are de-contextualized and where their previous social support system is greatly weakened [5]. In particular, for many Hmong the relocation marks the end of the prevalent form of their traditional religious beliefs and practices.

In the traditional Hmong worldview, the natural world is alive with spirits. Trees, mountains, rivers, rocks and lightning are all animated by distinctive spirits. Ancestor spirits not only remain around the living, but play an essential role in complex rituals of reciprocity with their living descendants.

The Hmong celebrate their humanity not as a discrete and impenetrable part of the natural order, but as part of the circle of life of all creation—caught up in the rotation of the seasons, and deeply connected with the configuration of the mountains, and the reincarnation of life from generation to generation, even from species to species. Life, in its myriad forms, is intimately articulated through souls and spirits [6].

In interviews with refugees, it became clear that many Hmong feared that the ancestor spirits who protected them from harm in Laos would be unable to travel across the ocean to the United States and thus could not shield them from spiritual dangers. Solace was taken, however, in the conviction that the myriad evil spirits who challenged Hmong well-being in Laos would also be prevented from following the Hmong to their new home. Among these evil spirits assumed

to have been left behind was the nocturnal pressing spirit *dab tsog* (pronounced 'da cho') [7]. It soon became frighteningly apparent, however, that this notorious evil spirit had made the journey to America as well.

HMONG SUDDEN UNEXPECTED NOCTURNAL DEATH SYNDROME

Since the first reported case, which occurred in 1977, more than 100 Southeast Asians in the United States have died from the mysterious disorder that is now known as SUNDS, the Sudden Unexpected Nocturnal Death Syndrome [8]. The sudden deaths have an unusually high incidence among Laotians, particularly male Hmong refugees. All but one of the victims have been men, the median age is 33, the median length of time living in the United States before death is 17 months [9], all were apparently healthy, and all died during sleep. The rate of death from SUNDS has reached alarming proportions: at its peak in 1981–1982, the rate of death among 25–44-year-old Hmong men (92/100,000) [10] was equivalent to the sum of the rates of the five leading causes of natural death among United States males in the same age group [11].

Despite numerous studies of SUNDS, medical scientists have not been able to determine exactly what is causing the deaths of these seemingly healthy people in their sleep [12]. Biomedical studies have taken into account such varied factors as toxicology [13–17], heart disease [12, 18, 19], genetics [14, 15, 20, 21], metabolism [15], and nutrition (particularly thiamine deficiency [22]), but are no nearer to a comprehensive answer. Current medical opinion appears to favor the role of abnormalities of the cardiac conduction system, although a 1988 report from the Centers for Disease Control indicates the incompleteness of this solution: "Only at night, in times of unusual stress, and possibly in conjunction with other, as yet undefined, factors are these people at risk of developing abnormal electrical impulses in the heart that result in ventricular fibrillation and sudden death" [9].

THE NIGHTMARE SPIRIT

Biomedicine thus provides no adequate answer to the question of what causes SUNDS; from my vantage point in the social sciences, however, I propose that an investigation of Hmong traditional belief can reveal the event that triggers the fatal syndrome. The focus of this research is a supranormal nocturnal experience that I refer to as the 'nightmare' and that is familiar to the Hmong. I use the word 'nightmare' not in the modern sense of a bad dream, but rather in its original denotation as the nocturnal visit of an evil being that threatens to press the very life out of its terrified victim [23–25].

According to descriptions of the Nightmare spirit [26], the sleeper suddenly becomes aware of a presence close at hand. Upon attempting to investigate further, the victim is met with the horrifying realization that he or she is completely paralyzed. The presence is usually felt to be an evil one, and often this impression is confirmed by a visual perception of the being, which places itself on the sleeper's chest and exerts a pressure great enough to interfere with respiration. The classic nightmare experience, then, is characterized by the following symptoms: the impression of wakefulness, immobility, sensation of pressure on the chest, realistic perception of the environment, and intense fear. (To avoid confusion, I use *Nightmare* [upper case] to refer to the spirit or demonic figure to which these nocturnal assaults are attributed and *nightmare* [lower case] to refer to the basic experience; that is, the impression of wakefulness, immobility, realistic perception of the environment, and intense fear [27]).

The case definition presented in the *Final Report of the SUNDS Planning Project* [15] emphasizes the need to observe closely people "who fit the demographic characteristics of SUNDS" and who have transient nocturnal events that include

- "(1) a sense of panic or extreme fear,
- (2) paralysis (partial or complete);
- (3) a sense of pressure on the chest;
- (4) a sense that there is an alien being (animal, human, or spirit) in the room; [and]
- (5) a disturbance in sensation (auditory, visual or tactile)."

This list of five symptoms of SUNDS-related events is identical to the characteristics of the nightmare experience as it is known in countless folk traditions, including those of the Hmong. Since the conditions described by Holtan *et al.* as "SUNDS-related" are consistent with the symptoms of a Nightmare attack, I decided to investigate the possibility that SUNDS is initiated by such a confrontation.

Based on preliminary fieldwork and a review of previous research, I developed the hypothesis that the supranormal nocturnal experience traditionally known as the nightmare and familiar to the Hmong acts as a trigger for the sudden nocturnal deaths [28]. In order to study the prevalence of the nightmare phenomenon and the role of the nightmare in traditional Hmong culture, I interviewed a representative sample of 118 Hmong in Stockton, California. In the course of research it was necessary to establish the veracity of a series of facts: first, that the Hmong supranormal experience that I had isolated was in fact a culture-specific manifestation of the universal nightmare phenomenon; second, that Hmong belief regarding the experience forms a collective tradition; third, that the Hmong nightmare, in specific contexts, causes cataclysmic psychological stress; and fourth, by drawing on the growing medical

and anthropological literature on ethnomedical pathogenesis, that intense psychological stress can cause sudden death.

The nightmare syndrome appears to be universal in its occurrence. There are innumerable instances of the nightmare throughout history and in a multitude of cultures; from the ancient Greek *ephaltes* (= leap upon) and Roman *incubus* (= lie upon) to contemporary examples such as French *cauchemar* (from La. *calcare* = to trample upon, squeeze), German *Alpdruck* (= elf pressure), Newfoundland "Old Hag" [23, 24, 29], Polish *zmora*, and Mexican *pesadilla* [30]. The nightmare's significance and impact vary considerably in different cultural settings, but the core nightmare phenomenology appears to be stable cross-culturally [31].

THE NIGHTMARE AND SLEEP RESEARCH

The consistent features of the nightmare are better understood with the assistance of concepts from laboratory sleep research. Somnologists distinguish between two major divisions of sleep: active sleep (or REM) and quiet sleep. REM sleep is characterized by brain waves resembling those of wakefulness. Unlike the waking state, however, the body is paralyzed, apparently to keep the sleeper from acting out his or her dreams [32]. In rare instances, this normal muscle inhibition or atonia occurs during partial wakefulness. This condition is known as 'sleep paralysis', a stage in which the body is asleep, but the mind is not. Often sleep paralysis is accompanied by hypnagogic hallucinations, which consist of complex visual, auditory, and somatosensory perceptions occurring in the period of falling asleep and resembling dreams [33].

Sleep paralysis and hypnagogic hallucinations are products of 'sleep-onset REM', a REM stage that occurs earlier than usual, when the individual is still partially conscious [24, 30, 34]. Sleep-onset REM accounts for the subjective impression of wakefulness, the feeling of paralysis, and, as a result, the tremendous anxiety that mark the nightmare experience. Researchers have shown convincingly that sleep-onset REM accounts for the subjective impression of wakefulness, the feeling of paralysis, and, as a result, the tremendous anxiety that mark the nightmare experience [23, 24, 27]. I extend these explanations of nightmare symptoms to include the fact that the sense of oppression or weight on the chest and the attendant feature of lying in a supine position are a result of the fact that when the sleeper is lying on his or her back, the atonic muscles of the tongue and esophagus collapse the airway. The relaxed muscles not only hinder breathing, but actually create a sensation of suffocation, strangulation or pressure on the chest of the terrified sleeper [35]. The connection between Nightmare attacks and sleep paralysis is highlighted by the fact that Hmong women report that some men, fearing that deep sleep

might bring about their deaths, set their alarm clocks to awaken them every 20 or 30 minutes [15]. Ironically, this type of sleep disruption may actually cause sleep-onset REM and nightmares (through the mechanism of 'REM pressure' [36-38]).

THE HMONG NIGHTMARE

In the Hmong language, the Nightmare spirit is referred to as *dab tsog* ('da cho'). *Dab* is the Hmong word for spirit, and is often used in the sense of an evil spirit. *Tsog* is the specific name of the Nightmare spirit, and also appears in the phrase used to denote a Nightmare attack, *tsog tsuam* ('cho chua'). *Tsuam* means "to crush, to press, or to smother" [39].

In the sample of Stockton Hmong, a total of 58% (36 men, 33 women) had experienced at least one nightmare. The interviews and the personal narratives they elicited clarified that the Hmong supra-normal experience that I had isolated was in fact a cultural manifestation of the Nightmare phenomenon. The following is a portion of a narrative from a 33-year-old Hmong man who had a nightmare experience shortly after his arrival in the United States:

First, I was surprised, but right away, I got real scared. I was lying in bed. I was so tired, because I was working very hard then. I wanted to go to school, but I had no money. I kept waking up, because I was thinking so much about my problems. I heard a noise, but when I turned—tried—I could not move. My bedroom looked the same, but I could see—in the corner, a dark shape was coming to me. It came to the bed, over my feet, my legs. It was very heavy, like a heavy weight over my whole body, my legs, my chest. My chest was frozen—like I was drowning, I had no air. I tried to yell so someone sleeping very close to me will hear. I tried to move—using a force that I can—a strength that I can have. I thought, "What if I die?" After a long time, it went away it just left. I got up and turned all the lights on. I was afraid to sleep again.

With regard to the emic term for the nightmare experience, 97% of the informants used either *dab tsog* or *tsog tsuam*. All of those who were able to provide a name for the nocturnal encounter could also define it. This widespread awareness of the Nightmare tradition clearly established that Hmong belief regarding the nightmare forms a collective tradition.

DAB TSOG AND HMONG RELOCATION

Since Hmong who maintain their traditional religious beliefs and practices and those who have converted to Christianity both die of SUNDS, the testing of the hypothesis of a belief-triggered disorder necessitated an exploration of the influence of the Nightmare on Hmong of both religions. In the sample, 54% of traditional Hmong and 72% of Christian Hmong had experienced at least one nightmare. The interview data reveals that psychological stress regarding religious practice is present among

both traditional and Christian Hmong refugees in the United States and also that this stress is exacerbated in both groups by the supranormal nocturnal assaults. Traditional Hmong face great difficulty in practicing their religion as they had done in Laos. The inability to obtain animals for slaughter, disruption of clan ties and the scarcity of shamans all contribute to the problem of performing expected religious duties. Many Christian Hmong also retain traditional beliefs and have anxieties about not fulfilling their religious requirements. Some Christian Hmong converted out of a sense of obligation to church sponsors and many experience peer disapproval and clan ostracization. Although the more devout Christians I spoke with denied any ambivalence, many of the Christian Hmong informants described ways in which they combined the two religions in order to prevent incurring the Hmong spirits' wrath. It is striking that of the informants who offered an explanation for the cause of SUNDS, 74% suggested an etiology that was directly spirit-related or involved the absence of traditional religion and ritual from their lives.

I have noted an increased incidence of nightmares during informants' times of stress. (Emotional stress, physical exhaustion and sleep deprivation have been shown to be predisposing factors for sleep-onset REM, see [27, 40–42].) According to the traditional belief informants described, *tsog tsuam* assaults are rarely, if ever, fatal on the first encounter.

It is believed that once you have one of those nightmares—you are visited by one of the *dab tsog* evil spirits—once you are seen by one of those evil spirits, often they will come back to you, until you have the worst nightmare and probably die.

Usually the lethal potential manifests only after an individual has been given time to rectify a situation, but chooses not to, or is unable to, appease the intruding spirit. As one informant explains, because of traditional countermeasures undertaken in Laos, SUNDS deaths did not occur prior to the Hmong exodus: "There were nightmares, but the sudden death was unheard of. It might have happened, but I never heard of it". None of the informants I interviewed recalled incidents of SUNDS deaths in Laos [43].

DAB TSOG AND HMONG SUNDS

Aside from the conflict between Hmong traditional religion and Christianity, Hmong refugees have experienced a host of hardships including language and employment problems, changing generational and gender roles [44], survivor guilt [45] and trauma-induced emotional and psychological disorders [46–48]. These changes can affect all Hmong immigrants in varying degrees, but Hmong men, in particular, have had their roles dramatically altered. This gender dichotomy is mirrored by the vast

discrepancy in the ratio of male to female SUNDS deaths.

Since both Hmong men and women suffer from Nightmare attacks, however, why are SUNDS deaths almost exclusively male? The answer lies in the meaning of Nightmare attacks in traditional Hmong culture. Hmong informants explained that among other religious requirements, one's ancestor spirits must be fed annually. If the ancestor spirits are neglected, they become angry, deserting the individual, the head-of-household, and leaving him vulnerable to evil spirit attacks. Most of the Hmong informants perceived a direct causal relationship between failure to perform traditional Hmong rituals and Nightmare attacks. (Etiologies related to either traditional spirits or to the lack of traditional religious practice constituted 81% of all the nightmare causes suggested.) One Hmong man summarized the widely held belief as follows:

At least once a year those evil spirits must be fed. If someone forgets to feed them, then they will come back and disturb you. If you have *tsog tsuam*, the ancestor spirit is supposed to protect you. If you feed the ancestors regularly, then whenever you have *tsog tsuam*, the ancestor spirits will protect you. Usually the father, the head-of-household, is responsible for feeding the evil spirits. Women have nightmares, too, but not as often as men. The evil spirit would first attack the head-of-household. Coming to this country, people tend to forget to do the rituals. A lot of people either ignore or forget to practice their religious belief. . . . Men are the ones who are responsible for feeding both the evil spirits and the ancestor spirits. Since they are not doing their part, it is logical that their soul should be taken away.

This explanation clearly has great significance for the investigation of SUNDS etiology in that it contains a matter-of-fact description of the precise manner in which a man's failure to fulfil traditional religious obligations can result in his death. The inability to fulfil roles and responsibilities with regard to religion (as well as in their lives generally) has a calamitous impact on the psyche of many Hmong males.

Although Hmong women do experience Nightmare attacks and are aware of the roles of both spirits and the absence of traditional religious practices in SUNDS deaths, they also know that *dab tsog* will seek out their husbands, fathers or brothers as the individuals held accountable. As one Hmong informant recalled of her own nightmare experience "Even though I was very, very scared, I thought it was good my husband wasn't there, so the spirit wouldn't hurt him." Several informants suggested that the one woman who died of SUNDS must have been unmarried or widowed and therefore, as the head of her household, the individual who was held accountable by the spirits.

If the nightmare is usually a transient, non-pathological phenomenon, how can it trigger a fatal disorder among Hmong refugees? Nightmare assaults occurred in Laos, but none of the informants I interviewed recalled incidents of SUNDS deaths in their homeland. I propose that the differences

between the Hmong way of life in pre-war Laos and their current situation in the United States are responsible for this phenomenon. The various resettlement stresses I have discussed manifest most strongly during the initial arrival period, thus explaining the overwhelming preponderance of deaths in the two-year period following resettlement in the United States [49].

The subject of intense emotional stress as the cause of sudden death is a motif well-represented in world folklore throughout history and has also been a topic of serious biomedical investigation. A number of anthropological and biomedical studies suggest a link between psychological stress and sudden death, see for example [50–55]. In the medical anthropological and ethnomedical literature, the notion of beliefs playing a significant role in illness causation (nocebo effect) or its remedy (placebo effect) is widely held [56]. Robert A. Hahn and Arthur Kleinman's notion of the pathogenic effects of belief or "ethnomedical pathogenesis", is a particularly useful concept for the study of the role of traditional belief in SUNDS. Significantly, the concept of ethnomedicogenic illness and healing, with its emphasis on the relationship between the mind/spirit and body, is compatible with the holistic traditional Hmong worldview regarding health.

Since Nightmare assaults and other spirit-related problems did occur in Laos, it is significant that Hmong refugees in the United States attribute SUNDS to traditional spirits. I believe that the differences between the Hmong way of life in pre-war Laos and their current situation in the United States are responsible for this phenomenon. Traditional Hmong culture has sustained a severe disruption. The Hmong have undergone a seemingly endless series of traumatic experiences: the war in Laos, the Pathet Lao takeover and subsequent Hmong persecution (including the threat of genocide), the harrowing nighttime escapes through jungles and across the Mekong River, the hardships of refugee camps in Thailand, and finally resettlement in the United States, with not only housing, income, language and employment concerns, but the separation of families and clans, inability to practice traditional religion, and hasty conversions to Christianity, among many others. These recent changes appear to account for the fact that, while SUNDS deaths occur in the United States, no informant I interviewed was aware of any SUNDS deaths in pre-migration Laos.

When *dab tsog* tormented sleepers in Laos, it did so in a sociocultural context that sustained a fundamental structure of support. Hmong shamans conducted prescribed rituals designed to ascertain the nature of the individual's transgression and sought to appease the angry spirits in order to prevent the possibility of the sleeper's death during a subsequent nocturnal encounter. In the United States, while the majority of Hmong retain many of their traditional beliefs, in many instances they have lost their religious leaders and ritual responses. The insular com-

munities that characterized Hmong life in Laos appear to have fostered traditional cultural practices whose presence alleviated, but whose subsequent loss provokes, feelings of terror and impending death associated with negative supranormal encounters. Therefore, although the *dab tsog* attack in Laos was akin to the worldwide Nightmare tradition, the peculiar stresses of the recent Hmong refugee experience have transformed its outcome. In conclusion, the power of traditional belief in the nightmare—compounded with such factors as the trauma of war, migration, rapid acculturation, and the inability to practice traditional healing and ritual—causes cataclysmic psychological stress that can result in the deaths of male Hmong refugees from SUNDS [57].

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7. Hmong was an exclusively oral language until the 1950s when Christian missionaries in Laos developed a written form using the Roman alphabet. In this essay, underlined Hmong terms represent words in the Hmong language written in the Roman Popular Alphabet (RPA). For ease of pronunciation I provide an English transliteration in quotation marks.
8. The disorder is also known by the acronym SUDS, Sudden Unexplained Death Syndrome. I think that both the unpredictable nature of the syndrome and the fact that 98 percent of the deaths occurred between 10:00 p.m. and 8:00 a.m. [9] warrant the inclusion of both the words 'unexpected' and 'nocturnal' in the label. Thus, Sudden *Unexpected Nocturnal* Death Syndrome is a more accurate description of the disorder. My use of the term SUNDS is consistent with that of The SUNDS Planning Project at Saint Paul-Ramsey Medical Center.
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27. I am indebted to David J. Hufford for his characterization of the nightmare in *The Terror That Comes in the Night* (1982). Although I have altered his configuration slightly [based on the results of my own fieldwork in Jerusalem (1987-88) and Los Angeles (1986-87)] Hufford's criteria, which are unique in the literature on the subject, remain the foundation of the minimal requirements for the nightmare experience as I present them.
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Nightmare spirits, do nightmare experiences precipitate similar disorders among other peoples? Although those affected by SUNDS are overwhelmingly Laotian Hmong men, individuals belonging to other groups, notably Filipinos, Thai, Khmu and Cambodians, have died of what appears to be SUNDS. A detailed discussion of these potentially parallel phenomena is beyond the aim of the present paper, but it is important to note that my preliminary investigation of Khmu and Thai sudden deaths indicates that individuals of both groups perceive a connection between Nightmare spirit attacks and sudden deaths in situations of extreme psychological stress. Any definitive statement regarding a correlation between these Nightmare spirits and SUNDS, however, requires an in-depth study of the type presented in this paper that focuses on the beliefs and experiences of the non-Hmong groups affected.