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Panic Disorder Among Cambodian Refugees Attending a Psychiatric Clinic:

Prevalence and Subtypes

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Abstract

This study surveys Khmer refugees attending two psychiatric clinics to determine both the prevalence of panic disorder as well as panic attack subtypes in those suffering panic disorder. A culturally valid adaptation of the SCID-panic module, the Cambodian Panic Disorder Survey (CPDS), was administered to 89 consecutive Cambodian refugees attending these psychiatric clinics. Utilizing culturally sensitive panic probes, the CPDS provides information regarding both the presence of panic disorder and panic-attack subtypes during the month prior to interview. Of 89 patients surveyed at two psychiatric clinics, 53 (60%) currently suffered panic disorder. Among the 53 patients suffering panic disorder, the most common panic attack subtypes during the previous month were the following: “sore neck” [51% of the 53 panic disorder patients (PDPs)], orthostatic dizziness (49% of PDPs), gastro-intestinal distress (26% of PDPs), effort induced (21% of PDPs), olfactory induced (21% of PDPs), and “while-sitting dizziness” (16% of PDPs).

Introduction

Many investigators have demonstrated the frequent occurrence of posttraumatic stress disorder (PTSD) and depression among Khmer refugees [1–4]. One study revealed that 92% of the Cambodian patients attending an outpatient clinic either to have suffered previously or to suffer presently from PTSD [1], while another revealed an 86% current prevalence in a community sample [2]. However, no studies have documented rates of panic disorder among Khmer refugees (or any Southeast Asian refugee group, for that matter [1–7]).

PTSD and panic disorder manifest a similar 1) psychoneuroendocrinology [8]; 2) phenomenology (e.g., both having “panic attacks” as a key feature) [9–10]; and 3) responsivity to certain panicogenic agents [11–13]. Several authors argue that trauma may result in PTSD and/or panic disorder [14–18]. In fact, two major correlational analyses of veterans that aim to determine the relationship of degree and type of trauma to resultant disorder support the hypothesis that the greater the trauma the person endures, the more likely that the individual will suffer both PTSD and panic disorder [19–20]. Studies have also revealed, in civil populations, a high rate of childhood abuse in those suffering panic disorder [14–18,21–23]. And investigators document, in veteran populations, a high rate of co-occurrence of PTSD and panic disorder [24–27]; for instance, in a study done by Mellman et al. [25], veterans with a severe combat history were shown to have a lifetime prevalence of PTSD of 82% and panic

disorder of 55%. In regard to torture, emerging literature demonstrates that traumatic suffocation experiences strongly predispose to panic disorder [28–30].

Given these studies suggesting a trauma-panic disorder link, considerable comorbid panic disorder would be expected in the Khmer group. Evidence of severe traumatization among Cambodian refugees includes: 1) Pol-Pot starvation, overwork, and torture [31–32]; 2) the very high rate of PTSD among this population [1–4]; and 3) extreme reactivity, with a recent psychophysiological study demonstrating that Khmers, upon exposure to video clips of anxiety-provoking scenes, have a much higher responsivity (by heart rate increase) and more general responsivity (i.e., HR increase to a variety of scenes) than Vietnam veterans suffering PTSD [33].

In fact, this author has noted an extremely high rate of panic disorder among Cambodians attending a psychiatric clinic. But the frequent presence of this psychiatric diagnosis among Khmer refugees may have gone unnoticed due to the existence of culturally specific forms of panic attacks in this group. For instance, orthostatically induced episodes of dizziness panic occurs quite commonly among my Khmer psychiatric patients; Khmers have a cultural syndrome that causes great fear that orthostatic dizziness may result in syncope and death [34,35]. Or too, Khmers very often suffer “sore-neck” panic attacks [36]; during these episodes, the sufferer fears that the neck vessels will burst due to an acute elevation in “wind-and-blood” pressure in the nuchal vessels. This leads not only to a concerned focusing on—and escalation of—autonomic arousal in the neck-and-head area (for example, dizziness, blurry vision, headache, and tinnitus) but also general autonomic arousal, such as palpitations and shortness of breath.

This article has two aims: 1) to survey the rate of panic disorder among Cambodians attending a psychiatric outpatient clinic and 2) to ascertain the prevalence of panic-attack subtypes in those Khmer patients suffering panic disorder.

Methods

A survey instrument was designed, the Cambodian panic disorder survey, (CPDS), based on the SCID module for panic disorder [37]. But the lead question for the SCID module for panic disorder—that is, “Have you ever had a panic attack, when you suddenly felt frightened or anxious or suddenly developed a lot of physical symptoms?”—was found to be an inadequate panic probe. Often a Khmer patient answered “no” to this question, but, upon further query, it was discovered that he or she had indeed suffered such episodes.

To give a typical example, one Khmer refugee answered negatively to the SCID panic module question above. The patient was then asked: “Do you sometimes experience orthostatic dizziness?” The Khmer patient replied: “Yes, at least once a week.” The patient went on to explain that these dizziness episodes are so severe that she must sit down again, then ensuing a hour-long period of palpitations, diaphoresis, and shortness of breath. She greatly fears death during these episodes: should she faint, this might result in death (as mentioned above, Khmers consider orthostatis to not infrequently result in fatal syncope) and when she does succeed in sitting down again, only by a quick “coining” (a local healing method said to remove “wind” from artery-like vessels in the body) does she attain relief. Without this “coining” intervention, the patient asserts she would not recover from the episode but rather would die.

Katon [38–40] and others working with somatizing populations [41] advocate the need to utilize panic probes of somatic aspects of autonomic arousal. After extensive clinical observation and interviewing, this author ascertained the probes that address the somatic manifestation of panic in the Khmer group: specifically, questioning about the presence in the last month of any of the following: 1) sore neck; 2) orthostatic panic; 3) gastrointestinal distress;

4) effort-induced dysphoria; 5) olfactory-triggered distress; or 6) sudden “while-sitting dizziness.” In addition, the author had noted other local manifestations of acute anxiety, and questions about the presence of these symptoms were asked, thereby hoping to increase sensitivity: 7) hunger-induced dysphoria; 8) “bouts of increasing bodily wind” (“increasing bodily wind” relates to the local understanding of the physiology of the body, with anxiety of acute onset often expressed in this idiom); 9) questions about the patient’s recent utilization of a self-treatment called “coining.” This is a local method of removing excess bodily wind; “increasing bodily wind” is said to be the cause of what we would call “acute somatic and psychic anxiety” (see Figure 1); and 10) the standard SCID panic probe. These probes also allowed the subtyping of panic attacks (other researchers have also classified panic attacks into different subtypes according to the predominant symptom [29,42–46] or by either artificial [46–50] or natural [9,43–44,48–49,51–57] inducers).

If a patient positively endorsed one of the 10 panic probes, the panic questions of the SCID panic module were asked (see Figure 2); for example, queries about the 13 criteria of autonomic arousal panic attacks (i.e., palpitations, sweating, trembling, and so on) and suddenness of onset (i.e., developed suddenly and reached a peak within ten minutes). But it was found to be easier in this population to ask the questions in a slightly different order (as suggested by Katon [37]), thereby dividing the questions into two sections (see Figure 2). In the first section, the questions aim to determine if panic attacks are present, and in the second section, the questions seek to ascertain if the panic attacks meet panic-disorder criteria. The investigator also found that the question regarding precipitant by caffeine or other substance was never endorsed. Instead this author added an item at the end of the interview to ensure that the panic attack was a clear example of a panic attack of the PTSD type: that is, “whether the panic attack was triggered by a loud noise or flashback.”

Eighty-nine consecutive patients attending community-based psychiatric clinics in Lowell and Revere, Massachusetts (both Southeast Asian Clinics) were interviewed by the first author with the assistance of bicultural workers (the co-authors of this article). The main investigator has extensive experience with Southeast Asians [58] and is nearly fluent in Cambodian, currently treating over two hundred Khmer. The interviews were considered part of clinical assessment and the patients participated voluntarily and gave fully informed consent.

Results

Of the 89 patients surveyed, 80% were female, and the mean age was 44. Ninety percent of the patients were illiterate. Eighty percent of the patients formerly worked as rural farmers before the Pol Pot period. At present, most patients do not work outside of the home, most kept busy raising small children or caring for grandchildren.

Using the CPDS, it was found that 53 of 89 patients (60%) suffered panic disorder. Though not considered criteria for caseness, two clinical features were shared by all the Khmer patients surveyed who were determined to have panic disorder: all experienced at least 5 min of heart palpitations and all also feared demise due to acute corporal dysfunction during the attacks.

In every case, if the patient had panic disorder, the patient answered positively to the first six probes. When the patient endorsed the other probes, such as having a wind episode, either the symptoms did not meet panic disorder criteria, or if they did, the episodes were centered around one of the complaints above (most usually, orthostatic dizziness and sore neck). Hence, panic probes 7–10 did not increase sensitivity.

In regard to panic attack subtypes among patients meeting panic disorder criteria (see Table 1), when classified by the symptom of most concern, the sore-neck subtype of panic was the most common: 51% of the patients surveyed who met panic-disorder criteria were found to

suffer panic attacks of this subtype in the previous month, the patient invariably fearing death due to neck–vessel rupture during these episodes. Orthostatically induced dizziness panic was almost as common: 49% of the patients surveyed who met panic disorder criteria suffered panic attacks of this subtype, the patient always fearing syncopal death during these episodes. GI panic disorder was not infrequent [26% of panic disorder patients (PDPs)], almost half of these episodes induced by hunger. Effort-induced panic was common (21% of PDPs) (in half the cases, accompanied by prominent dizziness). Olfactory stimuli resulted in panic attacks for 21% of PDPs, and “while-sitting dizziness panic” occurred for 16% of the PDPs.

Many patients suffered multiple subtypes of panic. The more psychiatrically ill patients demonstrated a sort of autonomic reactivity, panic resulting from standing, olfactory stimuli, and hunger, for instance. Such patients usually had comorbid PTSD and also demonstrated prominent startle (i.e., a noise inducer of a panic state, this a definitional characteristic of PTSD).

Discussion

Though the present study suggests that trauma results in high rates of panic disorder and PTSD, this hypothesis needs to be further investigated among Western populations. For example, since there are few non-traumatized adult Khmer in the United States, it is not possible to ascertain rates of panic disorder in a “normal population.” One could study the degree of trauma suffered compared to rates of panic disorder in the Khmer population (for instance, similar to those studies of degree of trauma suffered and resultant rates of PTSD and other disorders [15,16]), but such a trauma-load quantification is difficult; however, such a study would provide further corroboration of a robust etiological link of trauma and panic disorder.

Another limitation of the present study consists in the fact that the standard SCID probe for panic was not the first question asked. If the author had queried in this order, data would have been provided regarding the apparent sensitivity of the Western probe compared to the other probes. However, from clinical experience, the author found the SCID probe to be far less sensitive and of minimal clinical utility compared to the other probes.

Another possible critique of this study is the lack of a simultaneously administered instrument to provide concurrent validity. For instance, in the study by Katon et al. [40], the authors showed that the patients testing positive by the somatic probes had high rates of major depression, phobias, and anxiety and depression SCL scores compared with those persons screening negative. However, such a concurrent measure indicates that the panic probe identifies a distressed population, not that the panic instrument validly taps a construct that is “panic disorder” (i.e., it is not true concurrent validation, does not illustrate convergent validity). In addition, due to the extremely high rate of comorbidity in the Khmer refugee population, it would be extremely difficult to locate a population with just panic disorder (as per the CPDS) versus a group with no diagnosis, then comparing the two by some measure of distress (such as the SCL).

There are several points to emphasize about the validity of the CPDS—that is, its ability to identify something which is, in fact, “panic disorder” (i.e., construct validity), for example, whether it can differentiate PTSD and panic disorder (this an issue of specificity, of discriminant validity). The “panic attacks of the panic-disorder type” as manifested by the patients meeting panic disorder criteria in this study (as determined by the CPDS) differ from “panic attacks of PTSD type” in four important ways.

1. It was found that the Khmer panic-disorder patients had either panic attacks without clear trigger (e.g., sore neck) or with certain subtypes of triggers (e.g., orthostasis, exercise, or olfactory stimuli) (of course, the issue of the presence or absence of

triggers in the panic attacks of panic disorder has long been debated [9,48,59]). Unlike in PTSD, the panic attacks used to determine caseness for panic disorder in this study, as determined by the CPDS, were not triggered by either flashback or loud noise.

2. The Khmer patients meeting panic criteria focused on bodily events rather than an imminent external attack, so that there is an internal as opposed to external focus of attention.
3. Though it was not originally a panic disorder caseness criterion, all patients meeting caseness feared death due to bodily dysfunction during panic attacks (for instance, death due to the neck vessels bursting or as a result of a syncopal episode upon standing). In contrast, in “the panic attacks of PTSD”—e.g., as triggered by startle—the individual has flashbacks and fears external threats, with an acute paranoid stance resulting (for example, the veteran huddling underneath a desk, suffering a panic attack, fearing some assault) [9].
4. “The panic attacks of the panic-disorder type” of the patients qualifying for panic disorder in this study responded extremely well to benzodiazepines; almost invariably there resulted an immediate and dramatic reduction in panic length, intensity, and frequency, and, in some cases, the disorder disappeared completely. Such a response to treatment by benzodiazepines is very typical of “panic attacks of the panic-disorder type” [60]. In contrast, the panic attacks and hyperarousal of PTSD rarely respond—or if so only slightly—to treatment by benzodiazepines [61].

If, as this article would lead one to surmise, trauma may result in high rates of panic disorder, then one must ask by what mechanisms [14–18]. It could be hypothesized that four processes cause this surprisingly elevated rate of panic disorder in the Khmer refugee group.

1. It may be that certain somatic cues (e.g., the bodily sensations felt when blood pressure drops—and sympathetic tone adjustment occurs—upon standing) evoke certain past traumatic experiences even in the absence of conscious recollection. For instance, most Khmer patients formerly suffered severe starvation and overwork, often experiencing orthostatic dizziness and fainting episodes. Did this create a particular sensitivity to a “spinning sensation” (as induced by standing), in a type of somatic flashback and a sense of imminent death, thereby beginning a vicious cycle of apprehensive cognitions and escalating autonomic arousal so typical of panic [28–29,48,62–63]?
2. It could be that extreme prolonged trauma results in a lability of the autonomic nervous system that may be triggered by multiple cues, such as culturally salient symptoms (that is, certain bodily experiences linked to metaphors of emotion, ethnophysiology, and ethnopathology, as in the local construction of the meaning and implications of dizziness), strong stimuli (as in a noise), or reminders of trauma. In the presence of severe autonomic dysfunction, such causal processes may manifest both as PTSD and panic disorder.
3. Given that a society will have specific way of processing the symptoms of autonomic arousal caused by trauma, if that society happens to have multiple cultural syndromes that lead to a great deal of catastrophic cognizing regarding that arousal, then trauma in that group may tend to result in panic disorder. This hypothesis is strongly supported by the research done on anxiety sensitivity revealing that the greater in number and intensity the individual’s fears regarding somatic manifestations of anxiety, the greater the likelihood of panic disorder [64,65]. As mentioned above, Khmers seem to have multiple cultural syndromes generating such cognitions; for example, the “sore-neck syndrome” [36] and “wind-overload syndrome” [34,35] (this latter syndrome resulting in fears that orthostatic dizziness, this symptom indicating

excessive inner-wind accumulation, may herald syncope and death). In addition, Khmer have another cultural syndrome, “weak heart,” that causes Cambodians to worry that palpitations indicate cordial weakness and possible death due to “heart arrest” [66]. These beliefs may escalate further panicogenic cognitions during times of arousal.

4. It may be that torture by suffocation (e.g., forced immersion and placement of a bag over the head) can lead to the frequent occurrence of false suffocation alarm [67]. By similar mechanisms, witnessing of death due to drowning or suffocation may predispose to panic [30], just as data suggests that witnessing episodes of heart illness plays an important role in the generation of cardiac panic and hypochondriasis [68, 69]. In a survey of a refugee population, Mollica et al. [31,32] documented that during the Pol Pot period (1975–1979), nearly 50% had witnessed near drowning, about 40% had witnessed near suffocation with a bag, while almost 25% had almost drowned and over 15% had suffered near suffocation when a bag was placed over the head. Also, in Pre-Pol Pot times, Khmers, living in a frequently flooded environment, often experienced near and actual drowning. In fact, in an unpublished survey of a Khmer psychiatric population, trying to determine certain pre-Pol Pot experiences, this author found that of 100 patients queried, 36 could not swim, 37 had suffered near-drowning before age 15, and 17 patients stated that they started to feel routinely short of breath after the near-drowning experience [70]. As other authors have demonstrated, near-drowning and suffocation experiences strongly predispose to panic disorder [28–30].

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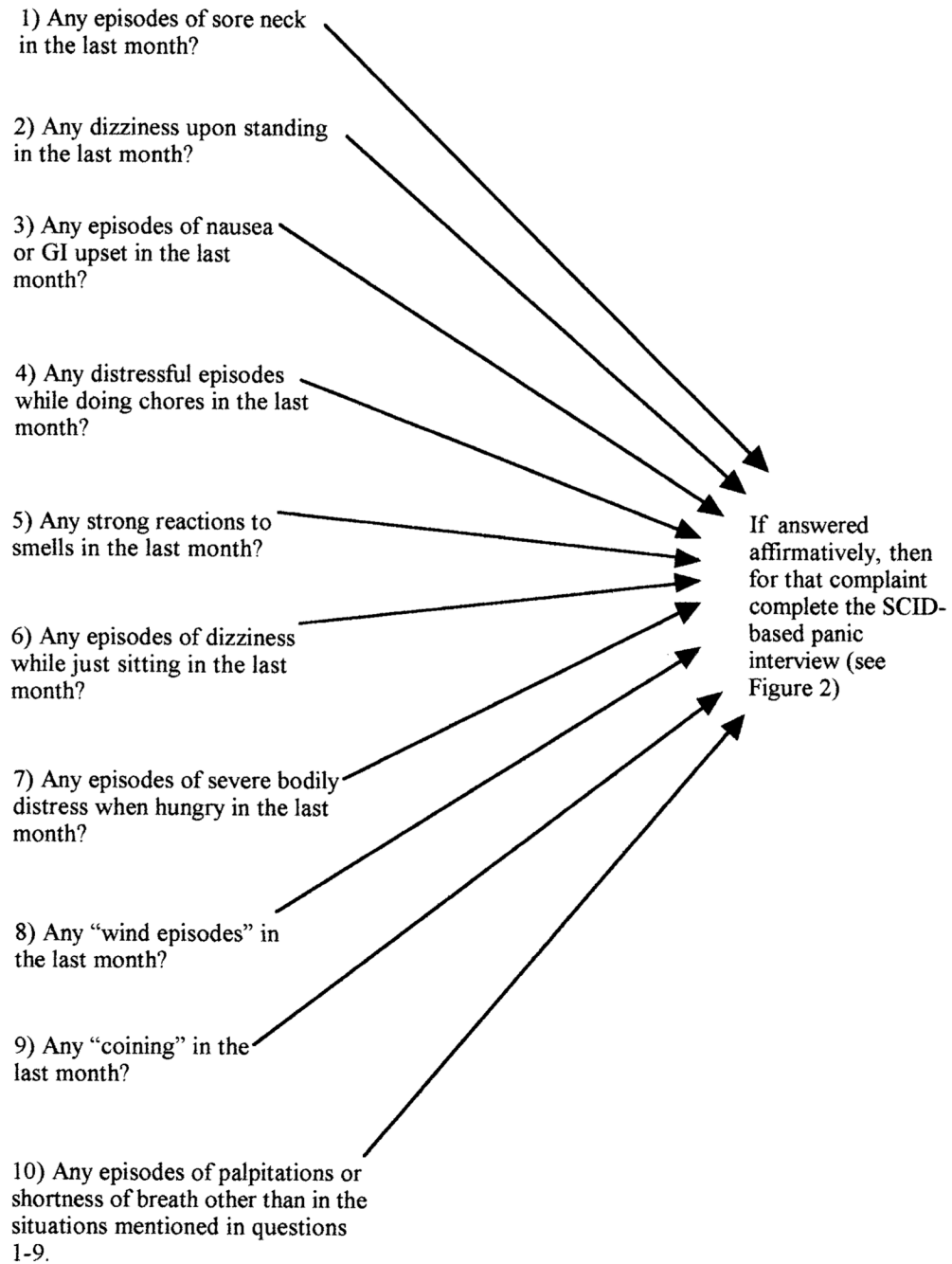


Figure 1.
Culturally sensitive panic probes for the Khmer patient.

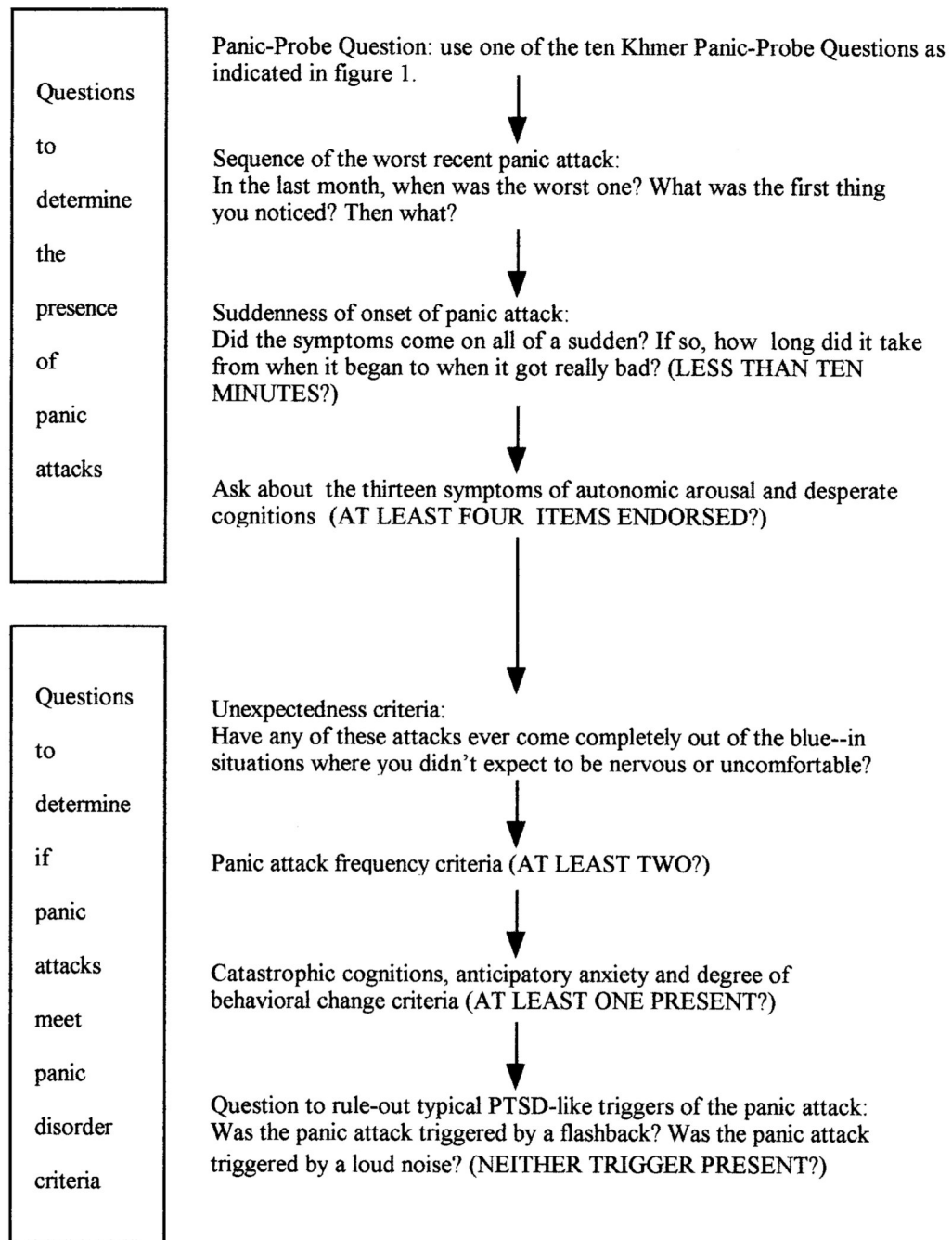


Figure 2. Outline of the SCID-based module (the CPDS) to determine whether the symptoms associated with a particular probe meet panic disorder criteria.

Table 1

Current 1-month prevalence of panic attack subtypes among Khmer refugees meeting the diagnosis of panic disorder by the CPDS

Panic attack subtypes		
Sore neck	Orthostatic dizziness	Gastrointestinal distress
51% of PDPs ^a	49% of PDPs	26% of PDPs
Effort induced	Olfactory induced	While-sitting dizziness
21% of PDPs	21% of PDPs	16% of PDPs

^aPercentage of the 53 PDPs who had at least one panic attack of this subtype in the previous month.