

Panic Disorder in Singapore: Clinical Features and Comparisons with Generalised Anxiety Disorder

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Abstract

Fifty-eight outpatients with panic disorder (PD) were examined to determine their clinical features in comparison with a cohort of 52 patients with generalised anxiety disorder (GAD). Both groups were of comparable age, sex, educational level, marital status and ethnicity. PD patients were more likely to complain of palpitations, breathlessness, chest pain, numbness, choking sensations and especially fear of dying. GAD patients tended to complain of feeling tense, insomnia, headaches, weakness, restlessness and muscle aches. PD patients had greater comorbidity especially with agoraphobia and depression. Contrary to other reports, there were more males than females in both groups but alcohol dependence and suicide attempts were relatively rare. PD symptoms seemed more distressing, caused more social and occupational disruption, led to more requests for medical investigations and earlier psychiatric consultations. These factors seemed to suggest that panic disorder is a more severe illness than generalised anxiety disorder.

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Introduction

In the last 10 years, the concept of anxiety disorder has undergone considerable revision. The most important revision resulted in the differentiation of panic anxiety from generalised anxiety. Thus panic disorder (PD) has been accorded the status of a distinct clinical entity, which sets it apart from generalised anxiety disorder (GAD).

Panic disorder, according to the 10th edition of the International Classification of Diseases (ICD-10)¹ is diagnosed in the presence of severe anxiety (panic attacks) which is not restricted to any particular situation or set of circumstances. There is a sudden onset of palpitations, chest pain, choking sensations, dizziness and feelings of unreality. Invariably, the patient also experiences a fear of dying, losing control or going mad. These symptoms escalate in a crescendo-like manner over seconds and the attack is over within minutes, rarely hours. A panic attack is often followed by a persistent fear of having another and the patient often develops phobic avoidance of the situation he or she finds himself or herself at the time the attack occurred.

In contrast, the essential features of GAD are continuous feelings of nervousness, trembling, muscular tension, sweating, light-headedness, palpitations and dizziness. The anxiety does not occur in an episodic manner and attacks of anxiety are absent. Other symptoms include early insomnia, frequent urination, ab-

dominal discomfort and headaches.

The present study is concerned with examining the clinical features of PD and examining the differences and similarities between PD and GAD.

Materials and Methods

The survey covered 4 psychiatric outpatient clinics in Singapore. Patients with a diagnosis of PD or GAD were identified from clinic records. They were interviewed by one of the researchers from our team and their diagnoses were based on the ICD-10 criteria.

Patients who developed other features of anxiety disorders, such as obsessions and compulsions, or phobias, depressive illness, alcohol or drug dependency secondary to their panic or generalised anxiety disorders, were included. Excluded from the study were patients with psychotic symptoms and organic mental disorders.

The severity of the illness was rated on a 4-point scale according to how much the patients felt their symptoms had affected their work and family life (Table I). Statistical comparisons for categorised variables were made using the chi-square.

Results

There were about 5000 patients registered with the clinics in question. For methodological reasons we decided to limit our search to at least 50 patients of each condition (as this would probably be sufficient for

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TABLE I: CRITERIA OF SYMPTOM SEVERITY

Severity of Symptoms	Extent of occupational and domestic disruption
Severe	Unable to go to work and family life severely disrupted
Moderate	Symptoms affect work and family life to a significant extent
Mild	Symptoms affect work and family life to a slight extent
Nil	No problems with work or family life

statistical analyses). The first 104 patients we were able to identify were randomly selected for the study.

Of the 104 patients in the study, 58 (53%) had a diagnosis of PD and 52 (47%) GAD. Panic patients were of comparable age, educational achievement, ethnicity and marital status from those who had generalised anxiety.

More than half (54.6%) of the combined group were under 39 years of age. There were no patients below the age of 20 or above the age of 65. The mean ages and standard deviations of the PD and GAD patients were 39.2 ± 9.8 years and 40.5 ± 11.4 years respectively. Although there were more PD patients in the age group of 21 to 39 years, this did not reach statistically significant levels.

There were 31 (53.4%) males and 27 (46.6%) females amongst those with PD. Of those with GAD, 30 (57.7%) were males and 22 (42.3%) were females. The majority had attained secondary, pre-university or vocational education. Nearly three-quarters (73.6%) were married, 20.9% were single and 5.5% were either separated, widowed or divorced.

The ethnic distribution of the group corresponded fairly well to that of the population of Singapore. There were 81.8% Chinese, 7.3% Malays, 6.4% Indians and 4.5% of other ethnic origins.

The commonest symptoms of the PD group were palpitations, breathlessness, chest pain, numbness, fear of losing control, choking sensations and sweating. Giddiness was experienced as much by patients with GAD as with PD. There was also no association between this symptom and a feeling of faintness ($P > 0.05$) or a fear of losing control/ dying ($P > 0.1$).

Prior to receiving treatment, about 35% of the patients were experiencing several panic attacks a day and about 38% were having several attacks a week.

Of those with PD, 36.8% sought treatment less than a year after the onset of their symptoms in contrast to 26.9% of GAD patients. Also, there were far more patients with GAD (25%) than PD (8.7%) who had their symptoms for 10 years or more. There was a tendency

TABLE II: SYMPTOM SEVERITY BY DIAGNOSIS

Severity	Diagnosis	
	GAD (%)	PD (%)
Severe	11.5	20.6
Moderate	28.9	39.7
Mild or nil	59.6	39.7
Total	100	100

GAD: generalised anxiety disorder; PD: panic disorder

$\chi^2 = 8.19$, $P < 0.02$

for those with PD to seek treatment earlier (less than a year from the onset of their symptoms) than those with GAD ($P < 0.05$). PD sufferers tended to rate their illness as more severe than those with generalised anxiety ($P < 0.02$) (Table II).

Of the PD patients, 65% had undergone previous physical investigations compared with 38% of the GAD patients ($\chi^2 = 7.003$, $P < 0.01$). PD was associated with more secondary diagnoses, especially agoraphobia, than GAD ($\chi^2 = 9.46$, $P < 0.01$). Out of 21 patients with phobias, 17 were diagnosed with PD. Depression was present in 10 patients of whom 6 had PD.

Suicidal thoughts were reported in 18% of PD patients and 17% of GAD patients. Males were as likely as females to experience such thoughts. Only one patient, a male with PD, had attempted suicide.

Discussion

A yield of 58 PD patients from a survey involving 4 psychiatric clinics is a small number. This is especially so when there are at least 5000 patients registered with these clinics having diagnoses other than PD or GAD.

In the Epidemiologic Catchment Area Study² of 5 cities in the United States it was found that 1.6% of the adult population had PD at one time in their lives. Using a broader definition for PD in the 3rd revised edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM III-R),³ it was estimated that the life-time prevalence would probably be 3% or 4 % of the adult population.

The reasons for our small numbers could be due to the following:

- The clinics have previously been using the ICD-9 criteria⁴ which do not have "panic disorder" as a diagnostic category. Prior to the introduction of ICD-10, patients who would now be diagnosed as PD were given the diagnosis of "anxiety state". Others with prominent somatic preoccupations could be referred to as suffering from "hypochondriasis" or if avoidant behaviour was present, "phobic neurosis". Hence, there could have been an under-reporting of panic disorder.
- The lack of awareness may also result in the likeli-

hood that such patients were referred for physical instead of psychiatric assessment. Our study indicates that of the 2 conditions (PD and GAD), those with PD had undergone more investigations than those with GAD ($P < 0.01$). Moreover, it is possible that although some patients had been referred to the psychiatric services, they had declined the referral as they could not come to terms with having a psychological problem.

- c) The reason our study has uncovered relatively few patients with PD could be that it is a relatively rare condition. We are of the view that although at present it appears to be a relatively rare disorder, with greater awareness of this entity in the years to come, panic disorder will be diagnosed with greater frequency.

It is widely known that anxiety disorders are far more common in women than in men and as many as two-thirds of outpatients with anxiety neurosis are females. In the Epidemiologic Catchment Area survey in the United States,⁵ the one-month prevalence rate of anxiety disorders for females was 9.7% and for males it was 4.7%. In the case of I'D, 0.7% were women and 0.3% were men. A recent community survey in Singapore by Yeo et al (unpublished data) showed that for panic disorder, there was a roughly equal proportion of male and female sufferers. Surprisingly, in our study, males outnumbered females in both conditions of PD and GAD. We suspect there may be cultural differences between panic patients here and in the West. Locally, more males could have sought treatment as they, being more likely to be working outside of the home, could have regarded their symptoms as potentially interfering with their ability to earn a living. Females, who were mostly housewives, might not have gone for treatment as their symptoms were probably not perceived as a threat to their domestic activities. According to clinic attendance statistics, the female to male ratio for all diagnostic groups in the 4 clinics during the period of survey approached parity (1.09:1). Hence, the overrepresentation of males in our study is not indicative of a trend whereby more males irrespective of diagnosis are attending these clinics compared to females. Unfortunately, we do not have any information on the sex ratio of patients with other non-psychotic conditions. Since the results of the community survey would suggest there are as many females as males with anxiety and panic disorders, it would appear that females are less likely to seek treatment than males.

We would also assume that although the community survey was carried out in a different part of the country than the location of the 4 clinics, the gender distribution of both conditions was fairly representative of those found elsewhere in Singapore.

In the West, PD patients have a tendency to abuse

alcohol.⁶ As males have higher rates of alcohol dependency than females, it is possible that more male PD sufferers had turned to alcohol rather than seek psychiatric help. This may result in an under-reporting of male PD prevalence rates. In our study there was no association between anxiety disorders and alcohol abuse. Male I'D sufferers were less inclined to drink alcohol than their Western counterparts but instead seemed more inclined to seek medical/psychiatric help. Although the precise reasons for the preponderance of males are still unclear, we are also not discounting the possibility of sampling bias.

Both the GAD and I'D patients were of comparable mean age. This was not found to be the case by others⁶⁻⁸ who reported that GAD patients were older than PD patients as the former had had their illness over a longer period. The age of onset was earlier in GAD compared to PD.⁹ In our study, there was a tendency for GAD patients to have endured their illness longer than those with I'D and this is also suggestive of an earlier age of onset.

Apart from alcohol abuse, PD sufferers had higher rates of phobic disorders, especially agoraphobia.⁶ About half of our PD patients with phobic conditions had agoraphobia. Klein and Gorman¹⁰ proposed a model to explain how agoraphobic symptoms develop in panic patients. Conversely, Beck¹¹ described how agoraphobic subjects go on to develop panic attacks.

The close association between PD and agoraphobia has at times resulted in the two being classified together as a single diagnosis, for example agoraphobia with panic disorder (in the case of ICD-10) and panic disorder with agoraphobia in DSM III-R. Such a relationship was demonstrated in our study. Although PD was more likely to be associated with phobic symptoms, it was not possible to ascertain whether the phobic disorders were primary or secondary to the development of panic symptoms.

The tendency to develop depressive illness was also evident. Both our PD and GAD subjects had depressive symptoms. Although there were more PD than GAD subjects with depression, the small numbers did not allow the drawing of firm conclusions as to whether PD sufferers were more prone to suffering from depression compared to those with GAD.

The presence of depressive symptoms in panic disorders has been well documented.¹²⁻¹⁴ Some¹⁵⁻¹⁸ explained this association in terms of a demoralisation phenomenon, that is, depression developing as a result of the limitations imposed on the individual by recurrent panic symptoms, the development of phobic avoidance and the chronicity of their illnesses.

When depressed PD subjects were compared with non-depressed PD subjects, those with concomitant

depression were found to have other comorbidity, often in the form of social phobia.^{18,19} We did not find this to be the case possibly because of the small number of patients with both depression and panic disorder.

However, the PD sufferers in our study did not report experiencing more suicidal thoughts than the GAD subjects. Only one PD patient had made a previous suicidal attempt. Although Markowitz and coworkers⁶ and Weissman and others²⁰ noted that as many as 20% of PD sufferers had made suicidal attempts, Beck and colleagues²¹ were unable to replicate the high rates of suicidal attempts reported in earlier studies but cited methodological differences as reasons for their discrepant findings. Others²² argued that the increased risk of suicide attempts and serious suicidal ideation was especially so when the PD was associated with a co-existing borderline personality disorder.

The symptoms of our PD and GAD patients were fairly representative of the ICD-10 diagnostic criteria. We did not attempt to compare the symptoms of both groups per se as this would merely reiterate much of the criteria used for diagnosing these disorders. However, we noted that there were symptoms common to both PD and GAD, for example, palpitations, breathlessness and giddiness. Others were more characteristic of either one or the other condition. The overlap in symptomatology might be a cause for some diagnostic confusion. On the whole, PD subjects had symptoms suggestive of autonomic hyperactivity whereas GAD subjects reported more symptoms of central nervous system hyperarousal, a view first advanced by Noyes and others.⁹ PD subjects tended to misinterpret their symptoms as indicating some mental or physical pathology, thus resulting in the fear of dying or losing control. When present, the latter symptoms should alert one to a diagnosis of PD. PD patients tended to complain of episodes of anxiety (panic attacks) occurring several times a week and lasting for 10 to 30 minutes, whereas the symptoms of anxiety in GAD patients tended to be more enduring and non-episodic.

It could be argued that the use of the ICD-10 criteria in our study might have caused our results to be incompatible with other studies that had used the DSM criteria. Apart from minor differences, these criteria are similar in many respects. Panic disorder diagnosed under the DSM III-R is essentially the same condition as that diagnosed under ICD-10. However, the differences would not have mattered as we were not comparing incidence or prevalence rates. Moreover, it also did not matter whether or not the patients were interviewed at standardised periods as treatment efficacies were not being compared here.

The tendency for PD sufferers to seek treatment earlier than GAD sufferers has been viewed by some²³⁻²⁵ as

indicative of a more severe illness. Our findings of more social and occupational disruptions, a greater likelihood of comorbidity and of having undergone more physical investigations amongst PD patients reflect these observations.

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