

# Patterns of headache in panic disorder: a survey of members of the South African Panic Disorder Support Group

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## Abstract

**Background:** Panic attacks and headaches often occur concurrently or are temporally related. **Aim:** The aim of this study was to report the prevalence of three types of headaches (tension headache and migraine with or without aura) and present the occurrence of various symptoms obtained from a questionnaire survey of a panic disorder support group. **Methods:** Two thousand questionnaires were distributed among members of the South African Panic Disorder Support Group. Diagnosis of the headache type was made according to the New International Headache Society's Headache Classification System. **Results:** The primary finding of this study was that the migraine headache versus tension headache ratio was 2:1, where in the normal population the ratio of migraine headache to tension headache is 1:3. **Conclusion:** The findings suggest a higher ratio of migraine vs. muscle tension headache among members of a panic disorder support group than the general population and a common link through the basic pathophysiology and neurochemistry of these two disorders is raised.

**Keywords:** Panic disorder, migraine, tension headache, headache, pain

Panic attacks and headaches are two common conditions that often occur concurrently or are temporally related in the same patient. Both clinical and epidemiological evidence suggests that there is co-occurrence between migraine and psychopathology.<sup>1,2</sup> A variety of authors have examined this association between headache and psychopathology in both epidemiological and clinical studies.<sup>3,4</sup> Major depression and anxiety are most linked to headache.<sup>2,5,6</sup> This association is most strongly noted in patients with migraine with aura.<sup>3</sup>

Anxiety is often considered an important cause of both tension and migraine headaches.<sup>7</sup> However, although controlled studies have tended to support the notion that anxiety is aetiologically related to headache they have had difficulty in defining this causal relationship between anxiety and headache.<sup>7,8</sup>

Some authors have argued that headache is a secondary symptom of a primary somatizing process (masked depression) that is a consequence of a chronic pain disorder.<sup>3</sup> Most studies strongly associate panic disorder with migraine compared with the other anxiety disorders. Breslau followed 995 young adults for a year.<sup>9</sup>

A history of migraine at baseline increased fourfold the risk for major depression, and the risk of panic by a factor of 12. In another study, males were 7 times more likely to have migraines if they suffered from panic disorder.<sup>6</sup> The findings suggest that migraine, major depression and anxiety panic disorder might share common predispositions.

This association is explained in two ways. Firstly, migraines occurring frequently and unpredictably at an early age may cause a behavioural response with symptoms resembling a panic attack, and over time modify behaviour and cause the associated autonomic symptoms of panic attacks.<sup>3</sup> Secondly, panic attacks and migraine may share the same or similar underlying physiologic abnormality, most probably with the serotonergic system.<sup>3,9,10,11</sup>

Headache is an episodic disorder and its diagnosis relies on the evaluation of symptoms that are reported retrospectively.<sup>12</sup> Furthermore the demarcation between the various headache types, even between migraine headache and tension headache, remains controversial.<sup>12</sup> Before the advent of the New International Headache Society's Headache Classification<sup>13</sup> meta-analysis of studies concerning headache were often difficult owing to the lack of standardisation in diagnostic criteria.<sup>11,14</sup> This ambiguity in research can now be avoided.

The aim of this study was to report the prevalence of three types of headaches (tension headache and migraine with or without aura) and present the occurrence of various symptoms on a sample from members of a panic disorder support group.

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NUMBER OF TENSION HEADACHES	NUMBER OF MIGRAINE WITH AURA	NUMBER OF MIGRAINE WITHOUT AURA	NUMBER OF POSSIBLE MIGRAINE
27 (30%)	22 (25%)	15 (17%)	22 (25%)

## Material and methods

Two thousand questionnaires were distributed among members of the South African Panic Disorder Support Group. Of the 2000 questionnaires distributed 96 were returned, of which 89 reported the presence of headaches. Diagnosis of the headache type was made according to the New International Headache Society's Headache Classification System.<sup>13</sup> The number and percentage of each diagnosis is presented in Table 1. The number of affirmative responses and percentage (per headache type) were noted and are reported in Table 2.

## Results

The results of this study are summarised in Table 1. The primary finding in this study was that the migraine headache versus tension headache ratio in this sample was 2:1, where in the normal population the ratio of migraine headache to tension headache is 1:3.<sup>9</sup> In particular, tension headaches occurred in 30% of the sample, as compared to migraine without aura in 17% and migraine with aura in 25%, with total definite migraine thus in 42%. Possible migraine occurred in 25%, increasing the probable migraine sample to 66%. The detailed

RESPONSE	TENSION HEADACHE N (%)	MIGRAINE WITH AURA N (%)	MIGRAINE WITHOUT AURA N (%)	POSSIBLE MIGRAINE N (%)
<b>NATURE OF PAIN</b>				
1. Throbbing	5 (18)	17 (77)	12 (80)	16 (73)
2. Band like	18 (64.29)	8 (36.36)	2 (13.33)	9 (40.90)
3. Stabbing	4 (14.29)	7 (31.82)	5 (33.33)	2 (9.09)
<b>LOCALISATION</b>				
4. Both sides of the head	10 (36)	6 (27)	5 (33)	8 (36)
5. Only one side of the head	6 (21)	13 (59)	10 (67)	7 (32)
6. On the top of the head	16 (67)	8 (36)	2 (13)	10 (45)
7. In the neck	19 (68)	7 (32)	9 (60)	9 (41)
<b>SEVERITY</b>				
8. Mild	7 (25)	1 (5)	2 (13)	2 (9)
9. Moderate	17 (61)	8 (36)	5 (33)	12 (55)
Severe	13 (46)	16 (73)	8 (53)	12 (55)
<b>DURATION</b>				
0-6 Hours	8 (29)	10 (45)	6 (40)	11 (50)
6-12 Hours	8 (29)	5 (23)	4 (27)	3 (14)
12-24 Hours	8 (29)	6 (27)	2 (13)	5 (23)
Longer than 24 hours	5 (18)	4 (18)	4 (27)	7 (32)
<b>SYMPTOMS PRESENT</b>				
Nausea	6 (21)	18 (82)	13 (87)	10 (45)
Vomiting	1 (4)	6 (27)	4 (27)	3 (14)
Sensitive to light	14 (50)	17 (77)	12 (80)	13 (59)
Sensitive to noise	18 (64)	16 (73)	11 (73)	17 (77)
<b>PRECEEDING SYMPTOMS</b>				
Visual changes	0	*	*	6 (27)
Unilateral weakness	4 (14)	7 (32)	1 (7)	5 (23)
Unilateral numbness	5 (18)	9 (41)	2 (13)	5 (23)
Speech change	5 (18)	10 (45)	3 (20)	3 (14)
<b>AGGRAVATING FACTORS</b>				
Exercise	5 (18)	8 (36)	4 (27)	6 (27)
Light	11 (39)	17 (77)	12 (80)	8 (36)
Noise	17 (61)	18 (82)	9 (60)	14 (64)
<b>FREQUENCY</b>				
1. 1 only	1 (4)	1 (5)	0	1 (5)
2. 1-5	2 (13)	1 (5)	3 (20)	3 (14)
3. 5-10	0	2 (9)	2 (13)	1 (5)
4. More than 10	25 (89)	18 (82)	10 (67)	17 (77)

phenomenology of the headaches is summarised in Table 2. As expected, migraines were more often associated with visual changes, unilateral sensory and motor symptoms and photophobia.

### Discussion

The results support the notions of the previous studies that reported increased prevalence of migraine headaches in patients with panic disorder. Although prevalence rates in the panic disorder population cannot be drawn from our results, it is interesting that the migraine headache versus tension headache ratio is 2:1, where in the normal population the ratio of migraine headache to tension headache is 1:3.<sup>12</sup>

The majority of respondents (82%) in the migraine with aura group report a high frequency rate when compared with the migraine without aura group (67%). The migraine with aura group also report the most amount of aggravating factors that affect the severity of the headache; although, both the migraine with aura and migraine without aura report photophobia, phonophobia appears more prevalent in the migraine with aura group.

This study is a self-reported survey, and has the limitations of that type of research, including the bias that may result from low response rates. The diagnosis of panic disorder was not clinically made, but was contingent on membership of a panic disorder support group so further inferences cannot be made. More definitive research in the area would be useful.

This data supports the notion that the members of this support group have an inclination towards migraine. The link that these two disorders may have is yet to be fully investigated. Whether migraine is related behaviourally to panic disorder, or they are different manifestations of the same underlying neurochemical pathology and thus are different manifestations of the same disorder, or, finally, they share very similar neurochemical aetiology that co-morbidity is often seen is not yet known. The relationship between migraine and panic disorder remains an important area for future research.

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