

Introduction

As we discussed in Module 1, panic attacks are surges of intense anxiety and fear. In panic disorder, panic attacks seem to occur unexpectedly and cause considerable distress. This module aims to provide more detailed information on how panic attacks develop. This module will also describe how panic attacks develop into panic disorder and what treatment strategies are useful.

How do panic attacks happen?

In Module 1, we discussed how a panic attack could be a “false alarm” - a spontaneous surge of fear without an actual physical threat. You might be wondering why panic attacks happen.

There can be several reasons why a person may have an initial panic attack. This could include a combination of a person’s biological make-up, personality, and the tendency for the body to develop a fear response. While these factors provide the setting for the possibility of a panic attack, one thing that often sets the stage is a person’s experience of stress. Many people recall that their first panic attack happened after a stressful period in their lives, such as after negative life events, relationship difficulties, or significant loss. It could also have been a brief period of acute stress, such as being in a situation where they suddenly felt very frightened (e.g., being stuck in a crowded shopping centre). In people who may be biologically more reactive to developing the fear response, going through these times of stress can make a panic attack more likely. So, for some people, their physical response to stressful events would be similar to how their body would respond if they were in real physical danger.

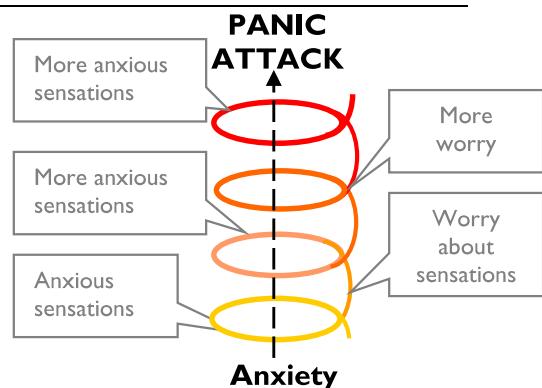
TRIGGERS FOR PANIC

Panic attacks may begin to build when an external or internal trigger is perceived as threatening. External triggers may be situations in which you feel a little apprehensive. For example, going into a room that feels stuffy, or onto a crowded train, or a supermarket from which it may be difficult to escape. You can probably think of a few situations right now that you may feel anxious about.

Internal triggers might include thoughts, images, memories, and bodily sensations. These triggers may be ordinary events until you interpret them as somehow threatening. For example, have you ever felt tightness in your chest or felt your heart beat faster and thought, “What’s wrong with me?” - leaving you feeling quite anxious? Remember, our belief that something is threatening leads to anxious feelings. When we perceive a situation, thought, image, or sensation as somehow threatening, we will begin to feel anxious or apprehensive.

Do you notice any common triggers of your panic attacks (external or internal)? Or do they tend to occur unexpectedly, i.e., “out-of-the-blue”? Jot down any triggers you notice here:

So, when we start to feel anxious, we may notice some physical changes, such as increased heart rate, shortness of breath, tightness in the chest, dizziness, etc. Usually, these signs of anxiety will soon subside on their own if the threat is not real. However, what do you think would happen if, before these sensations subside, you start worrying intensely about the meaning of those sensations? For example, you might think that this could be a heart attack, or perhaps, that you are losing control or going crazy.



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These thoughts would add to your fear and your anxiety would likely build up. Think about it this way: what would happen if you thought you would have a heart attack or faint? Your anxiety about these anxious sensations would probably increase, which makes the anxiety sensations stronger, which would increase your anxiety about those sensations, and so on. You can probably see where this is leading. The anxiety would rise so quickly that a “panic attack” would result.

Returning to baseline

Once the immediate danger has passed, the body can start to return to a more relaxed state. As a result, the heart rate begins to slow, the breathing rate slows, the body's temperature decreases, and the muscles start to relax. However, the systems involved do not return to normal straight away. In primitive times, if a wild animal confronted us, we would still need to remain prepared in case it came back. Full restoration to a relaxed state happens slowly, leaving the individual feeling ‘keyed up’ for some time. That is one of the reasons why people can feel anxious for ongoing periods when no obvious stressor is present.

How does panic disorder develop?

Though many people have panic attacks, it becomes a problem when a person cannot go about their lives adequately due to how frequent and how severe the symptoms are – this is known as Panic Disorder. Now that we've talked a little about how a *panic attack* develops, you may wonder how someone develops *panic disorder*. There's no simple answer, of course, as everyone is different. However, some important factors have been identified. These factors can generally be divided into biological and psychological causes.

BIOLOGICAL FACTORS

No single gene is linked to anxiety or panic disorder. Studies of twins and of families do suggest that individuals may inherit a vulnerability (i.e., increased chances) to developing an anxiety disorder. As we mentioned earlier, some people may be physically more prone to experiencing a panic or fear response, be it in response to a physical threat or to negative life events.

PSYCHOLOGICAL FACTORS

Having a biological vulnerability does not necessarily mean that someone will develop panic disorder. A great deal also depends on the person's lifestyle, types of life stressors, and early learning. For example, perhaps as a child you were taught that certain changes in bodily sensations, such as those due to anxiety, were negative or dangerous. This means that whenever you notice any signs of anxiety within yourself, your brain will likely conclude that “something must be wrong”. Or perhaps you learned that if you had such sensations, you should rest or be very cautious about them. If you have not had the opportunity to unlearn these thinking patterns and behaviours, they may continue to develop and contribute to your distress about panic symptoms.

Now let's imagine that, with these patterns of thinking and behaviour, you experience a false alarm. Unsurprisingly, you might become even more anxious and apprehensive about these bodily sensations. Panic attacks can be very intense! Several psychological factors can also contribute to frequent and severe panic symptoms when this apprehension about physical symptoms develops.

Anxiety sensitivity

When someone experiences panic attacks and is apprehensive about them, it can be easy to associate mild physical symptoms (such as an increased heart rate) with the possibility of intense panic symptoms or believe that such symptoms might signal the onset of a heart attack or “going crazy”. As a result, the person can become very attentive to bodily sensations such as tightness in the chest, breathlessness, dizziness, and sweating because they are



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worried about having a panic attack. They scan the environment for any situation or sensation that may indicate a potential anxiety episode, hoping to avoid it.

This situation is like an over-sensitive smoke alarm. It is so sensitive that it gets activated at the slightest chance of smoke. It is so sensitive that the alarm activates even if there is no danger (e.g., when someone is cooking, or when hot air escapes from the bathroom!). Something similar happens with a person who is anxiety-sensitive. They continually find themselves becoming anxious (i.e., activation of the fight/flight alarm system) at the slightest suggestion of threat (eg. "I'm feeling hot - I might have a panic attack").

Focus on internal sensations



Being sensitive to anxiety symptoms often results in the person scanning their environment for possible cues for anxiety. Often this means focusing inwards and noticing all the different physical sensations. By focusing on your body reactions, such as sweating or trembling, it can be easy to convince yourself that you have a physical problem (eg, "I'm having a heart attack") or a mental problem (eg, "I'm going crazy"). This can start the panic cycle that we described previously, leading to more frequent panic attacks.

So, what's the end result? Well, because there seems to be no obvious external reason for the panic attacks, they appear unpredictable and "come out of the blue". They can also be very distressing because of the intensity of the symptoms, because they are unpredictable, or because it is difficult to escape from places where they might occur. As we discussed in Module 1, these are the markers of panic disorder.

How is panic disorder maintained?

Once panic disorder develops, several factors contribute to keeping the panic symptoms going.

UNHELPFUL THOUGHTS ABOUT PHYSICAL SYMPTOMS

What do you think is happening when you experience physical sensations of anxiety? What's so bad about having those sensations? What's the worse that you worry will happen?

Have a look at the thoughts or predictions you wrote down. Do you notice any themes among these thoughts? How would believing in these thoughts impact on your anxiety?

You may find the thoughts you wrote down tend to be quite negative and may even contain an element of the "worst case scenario". These are very common 'thinking traps' or misinterpretations that people can have about their anxiety symptoms. We tend to *overestimate* the likelihood that something bad will happen to us and believe that the consequences will be very *catastrophic*. Basically, when we experience an uncomfortable anxiety sensation (e.g., racing heart), we think that it is a sign of something dangerous, and that when it does happen, it will be extremely bad (e.g., "I'll have a heart attack and die!"). It's no wonder that this would lead to us feeling more anxious!

Anxiety sensitivity & Focus on internal sensations

If we believe that the physical symptoms we experience when feeling anxious are a sign of something dangerous, it makes sense that we will pay extra attention to them. In the previous section on how panic disorder develops, we discussed how anxiety sensitivity and focus on internal sensations might influence the development of panic disorder. They also help to keep it going. The more a person learns that anxiety symptoms may signal an oncoming panic attack, the more focused they become on monitoring internal

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changes, intending to try to prevent another attack. When people believe these symptoms mean physical or mental danger (e.g., signs of a heart attack, stroke, or of losing control and going crazy), it is no wonder they start scanning for signs of threat! However, we all have normal fluctuations in physical symptoms over the day, which means that even normal changes in physical sensations can be mistaken for the possibility of a panic attack or the potential for mental and physical danger. The belief that those dangerous symptoms contribute to the ongoing distress associated with panic might even make panic attacks more likely.

What do you pay attention to the most when you are feeling anxious? Are there any physical symptoms that you notice more easily than others? What happens when your attention fixes on your bodily sensations and you're not able to focus on other aspects of the situation? Does the feeling of threat increase or decrease?

If we perceive something as dangerous and catastrophic, we are going to try to avoid it at all costs. In circumstances where we cannot avoid, we may resort to using safety behaviours as described below.

AVOIDANCE

Many people who have become distressed about the possibility of having panic attacks often avoid situations where panic attacks may occur or activities that may trigger symptoms associated with panic. While avoiding some situations may reduce anxious feelings in the short term, it reduces your opportunity to learn that anxiety symptoms are not dangerous (e.g., that my racing heart will eventually subside and is not a sign of a heart attack). In other words, avoidance prevents people from challenging their fears, and these fears will remain strong. The more we *don't do* something, the more we tell ourselves we *can't do* something.



What situations, people, or places may you avoid because of your panic attacks? What are the consequences of avoiding these things?

SAFETY BEHAVIOURS



Even if you don't fully avoid situations where you think panic attacks may happen, you may go into these situations and behave in ways to minimise those anxiety symptoms. In Module 1, we talked about how you might use "safety behaviours" to prevent future panic attacks or symptoms of anxiety. For example, you might sit in the chair closest to the door to make a quick escape if necessary. Perhaps you do some breathing exercises to reduce your anxiety in the situation. In this case, although you're not avoiding the situation, you are avoiding the anxiety symptoms. However, in using this subtle avoidance, these safety behaviours, you never lose fear of your panic attacks. This means that you continue to worry about them, focusing attention to them.

Do you notice any of your safety behaviours (or safety people)? What are the consequences of using these behaviours?

Model of how panic disorder is maintained

So how does this all fit together? We will all feel anxious from time to time, and this anxiety response is normal, rather than a problem. For some of us who have a greater biological vulnerability *and* have learnt physical sensations are somehow negative or dangerous, when our **fight-or-flight response is activated**, we may then **interpret the resulting physiological symptoms in a catastrophic way** (which often leads to more anxiety, and more physical symptoms). To reduce (or stop) these symptoms, we naturally try to distance ourselves from the initial trigger. This might involve **escaping the situation, avoiding it altogether, or using safety behaviours** to ‘protect’ us if we can’t avoid it. While these behaviours might bring us relief in the short term and the physical symptoms will decrease, they can backfire in the longer term. Avoidance and safety behaviours prevent us from learning to cope with the situation, and from discovering that it may not be as dangerous as we thought. We may even start to rely on our safety behaviours and become more anxious when we cannot use them. Consequently, we remain stuck in the vicious cycle of panic.

The following example illustrates the development of this vicious cycle.

After accepting a job promotion three months ago, Mirna has become more stressed with the extra responsibilities and longer work hours. She began to feel more anxious when having to present at work meetings and meeting strict project deadlines, and one day, she experienced a panic attack out of the blue. Since that attack, Mirna has become more vigilant about her body's physical sensations, including feeling tight in her chest, heart palpitations, dizziness, dry mouth, and tingling in her fingers and toes. She spends a lot of time scanning her body for these symptoms and worrying about experiencing them, to the point that it has affected her concentration. When she notices these physical symptoms, she fears that “I'm going to have a heart attack” or “This is a sign that I'm having a stroke”.

As a result, Mirna had to leave in the middle of a work meeting, and after she left, she noticed the symptoms started to let up. Nowadays, she tries to get out of attending meetings where she can, telling her colleagues she will catch up later. Mirna avoids speaking with her boss so that she would not have to take on new projects, and she has stopped going to the gym after work because the physical sensations feel too unpleasant and have sometimes triggered a panic attack. In addition, she often carries a few anxiety tablets in her purse and takes a water bottle with her wherever she goes, ‘just in case’. Mirna has seen her doctor a few times about these symptoms, but all the tests and check-ups indicate that she has no physical health issues. Her doctor suggests that what Mirna is experiencing is anxiety, and in particular, Panic Disorder.

On the following page, we have collated this information into a model, so it is easier to see how Mirna’s panic disorder is triggered and maintained. As you can see, Mirna is caught in a vicious cycle of focussing on and misinterpreting her physical symptoms as catastrophic, subsequently avoiding situations or using safety behaviours to try to stop panic attacks. In the long term, this prevents her from learning that those physical symptoms are not dangerous, and that she can cope with her anxiety. There is also a blank model below Mirna’s example for you to detail your own experience of panic attacks. We recommend that you go back to the answers you have recorded throughout these modules so far, to help you create your own model.

In the final section of this module, we will provide a preview of what can be done to manage panic disorder.

What can be done about panic disorder?

MEDICATION

Medication has been used to reduce anxiety symptoms and reduce the likelihood that you will have panic attacks. While several different medications may help reduce anxiety symptoms, it is often difficult to know which will work the best. You should always speak to your doctor if you have any queries about medication, and if your doctor prescribes them, make sure you follow all the instructions, and report any side effects.

COGNITIVE-BEHAVIOURAL STRATEGIES

Another powerful treatment option for reducing panic attacks is cognitive-behavioural therapy (CBT). Cognitive and behavioural strategies address the three components that specifically contribute to panic and intense anxiety. You may recall from Module 1 that the three main types of anxiety response include cognitions, physiology, and behaviours. In this way, cognitive-behavioural strategies seek to change the anxiety habits that may have developed around panic and anxiety.

Cognitions

For people who experience panic attacks, cognitions can occur in the ‘here-and-now’ of the situation, and may include focusing on physiological sensations of anxiety/panic, and then catastrophically interpreting them. Importantly, our perception of particular cues as dangerous contributes to increasing anxiety.

These cognitions are also part of a bigger picture of thinking processes. People who experience panic attacks often worry excessively about anxiety symptoms. They may overestimate the likelihood of having a panic attack and overestimate the consequences of having a panic attack. This continued fear of fear starts the feelings of anxiety, which then prompts the search for evidence of threat and danger. **In Module 3**, we will learn how to identify the unhelpful thoughts contributing to anxiety about panic symptoms (including misinterpretations of the physical symptoms) and how to challenge them.



Physiology

Remember the physical symptoms that our bodies experience in reaction to anxiety-provoking events? These include rapid breathing, pounding heart, sweating, clammy palms, and muscle tension. For some people, changing breathing patterns can help to show that anxiety symptoms are not dangerous because they are under your control. However, we don’t want you to use breathing strategies, like the calming technique, as a safety behaviour to avoid anxiety. Therefore, **in Module 4**, we will focus on experiencing those panic sensations so that you have real proof that they are not dangerous.

Behaviour

One of the most important factors that needs to be addressed when overcoming panic and anxiety is the avoidance of symptoms of anxiety, avoidance of situations where panic attacks might occur, and the use of safety behaviours to try to prevent panic attacks. **Modules 5 and 6** will suggest some ways to approach the things you are avoiding in a structured way so that you can start to feel less anxious about symptoms of panic attacks. After all, if you didn’t want to feel less anxious and panicky, chances are you wouldn’t be reading this information!

Monitoring your panic attacks

On the next page is a worksheet that you can use to monitor the cognitive, physiological, and behavioural components of your panic attacks. You can complete it over the course of the next week or two, then repeat this worksheet when you have completed the workbook to compare your experience of panic attacks before and after. The prompt questions will also assist you to become more aware of potential external and internal triggers – this information will become useful when doing the exercises and experiments in upcoming modules.