
ANXIETY AND PANIC ATTACKS

Christian Jonathan Haverkamp, M.D.

Abstract - Anxieties can cause incredible suffering, especially in combination with panic attacks, which are usually a short-lived but more intense form of anxiety. At the foundation is often a subconscious, or sometimes partially conscious, feeling that something in life is 'out of sync'. Anxiety is often triggered by interpersonal difficulties, such as relationship breakups or human problems at the work place. The less one has a good sense of oneself, one's values, interests and needs, the more difficult interactions and communication with others can become, the lower is one's resilience in conflicts and situations of divergent interests. All this can induce and maintain anxiety. While a predisposition for anxiety has been shown on the molecular biological and the epidemiological level, it usually is triggered and maintained by conflicts on the inside or the outside. Psychotherapy has been shown to be very effective in treating anxiety disorder and panic attacks.

Keywords: anxiety, panic attacks, psychotherapy

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Anxiety Disorders

Anxiety disorders are a group of mental disorders characterized by feelings of anxiety and fear. (APA, 2013) Anxiety is a worry about future events and fear is a reaction to current events. These feelings may cause physical symptoms, such as a fast heart rate and shakiness. There are a number of anxiety disorders:

- generalized anxiety disorder
- specific phobia
- social anxiety disorder,
- separation anxiety disorder,
- agoraphobia,
- panic disorder, and
- selective mutism.

Often the same individual has more than one anxiety disorders, but in many cases, there might only be one type.

Anxiety is often a signal that something is 'out of sync'. However, anxiety disorders can have several epigenetic factors:

- Biological
- Psychological
- Social/economic

Biology

Anxiety is a behavioural state, which occurs in response to signals of danger. On the physiological level these signals initiate activation of the hypothalamus-pituitary-adrenal (HPA) axis (Boyce & Ellis, 2005) and secretion of adrenal steroids called stress hormones, which are present in almost every vertebrate cell (Korte, 2001) This leads to increased heart rate, deeper breathing, vigilance, decrease in feeding, and exploration of environment (Cannon, 1916). The genes that code for stress hormones are highly conserved across diverse species: primates, rodents, reptiles, and amphibians (Lovejoy & Balment, 1999; Lovejoy & Jahan, 2006). Neuroevolutionary studies have shown that anxiety is an adaptive response that has been conserved during evolution (Nesse, 1998; Stein & Bouwer, 1997).

Individuals can have a genetic predisposition towards anxiety, which means they are more likely to suffer from an anxiety than someone who does not have this predisposition given the same amount of stress or other internal psychological or external factors. The amygdala, for example, is believed to play a key role in assigning emotional significance to specific sensory input, and conditions such as anxiety, autism, stress, and phobias are thought to be linked to its abnormal function. Growing evidence has also implicated the

amygdala in mediation of the stress-dampening properties of alcohol. There have been reports that decreased phosphorylation of cAMP responsive element-binding protein (CREB) resulted in decreased neuropeptide Y (NPY) expression in the central amygdala of alcohol-preferring rats, causing high anxiety-like behaviour (Wand, 2005). Alcohol intake by these animals was shown to increase PKA-dependent CREB phosphorylation and thereby NPY expression, subsequently ameliorating anxiety-like behaviour. Thus, a CREB-dependent mechanism may underlie high anxiety-like and excessive alcohol-drinking behaviour.

Panic Attack

The first panic attack can occur as from nowhere and the sudden sense of imminent death or literally going crazy usually comes as an enormous and sudden shock. In many cases, it has five stages:

An ominous feeling of an imminent panic attack. A heightened sense of self-consciousness with beginning hyperventilation and other symptoms.

- The sense that there is no way to avert the full-blown panic attack.
- The panic attack with hyperventilation, heart palpitations, the sense of imminent doom and/or death.
- Alternations in the intensity of the panic attack, leading to a decline after about ten minutes.
- A post-panic phase in which there is a sense of exhaustion and sometimes elation that it is over.

Since the first panic attack often occurs in adolescence or young adulthood, the individual might not know what a panic attack is. In older people, panic attacks often lead to visits to the hospital emergency admission.

Invisibility

A feature of many anxieties and panic attacks is that they go largely unnoticed by the environment. Anxieties and panic attacks can lead to the inability to leave the house and interfere with almost every sphere of life, professional, social, and one's relationships. When anxiety reaches into all areas of life and no longer seems specific to certain situations and locations, we call it 'generalized'. It is then the pure form of a disturbing feeling that no longer is attached to specific object, but 'floats freely'.

Loneliness has been demonstrated to be strongly associated with anxiety over social skills, for both male and female undergraduates and for a variety of social relationships. Both factors were related significantly but independently to loneliness, with anxiety having a larger effect size. (Solano & Koester, 1989) Communication as a basic information process plays a strong role in anxiety. (Haverkamp, 2012, 2017b)

Lack of Communication

When people identify and talk about their emotions, they usually become more manageable to the individual. This also applies to anxiety. The more one can talk about the anxiety and the underlying emotions, the less the anxiety will feel uncertain and unpredictable, which helps break through the vicious cycle of feeling anxious about feeling anxious. Any form of communication can potentially break through the vicious cycle. Psychotherapy, however, can deliver results faster and more reliably, because of the focus of the interaction and the training of the therapist.

Loss of Control

Anxiety and Panic Attacks are often a result of a perceived loss of control in an area one feels is relevant to oneself, emotionally and otherwise. Often patients mention the sense of loss of control. This may be linked to emotions from past experiences which have not been resolved or current stress situations which have led to feelings of entrapment in a hopeless situation with out a way out. At the core is the sense that one is not strong enough to bring about a change, which is often a result of losing the sense of efficacy in the world. Since communication is how humans interact with the world, the loss of control is ultimately due to the faith in the own abilities to communicate with oneself and the world. (Haverkamp, 2010a, 2010b, 2017a, 2018)

The Need for Control

The more one perceives being in a situation where one cannot pursue the own needs, values and aspirations, the higher is usually the sense of loss of control. If there is also a perceived lack of strength and ability to bring about a change, the loss of control will only be increased. Frequently, when there is an underlying depression or unresolved negative past experiences, the own sense of efficacy will be lowered, which can then lead to an aversion of change and a persistent feeling of being trapped.

On the other side, a greater sense of stable factors in oneself and the world can lower anxiety. Such factors may include a good and stable sense of self, basic values, fundamental needs and wants, several personality traits, character attributes, one's memory of facts and thoughts, a sense for one's body, and a number of other factors. Once one learns to explore and reflect on oneself and the world around, the need for control lessens because one sees more regularity and structure and learns to experience excitement rather than anxiety when looking at oneself and the world.

A Signal of Change

Since anxiety is a sign that something is 'out of sync', it also signals a necessity for change. This does not necessarily require a change in job or relationship partner, but often it does mean that a modification of existing relationships or situations can be beneficial. When things seem to be out of sync, the world becomes less certain and predictable. Anxiety is not a fear of something specific, but of uncertainty itself. It springs from a realization that something is out of sync, and usually this something refers to interpersonal relationships. People may be fearful of objects, but the latter are unlikely to cause anxiety.

Anticipatory processes are a general feature of the mind that includes responses to both real and imagined (neurotic) appraisals of a situation. (Wong, 1998) This has originally been described by Freud as signal anxiety, whose general concept has been confirmed in research. From a communication perspective, anything that helps in making the information of emotional conflicts available to consciousness is valuable. This can help the individual to reduce the emotional conflicts, primarily through communicating with the environment and with oneself.

Fear of Imminent Death: Somatic (Body) Reaction

Panic attacks often trigger thoughts of an imminent death, such as not being able to breathe anymore or a heart attack. They frequently go along with bodily 'fear' reactions, such as heart palpitations and dizziness. In general, there is a general sense of a loss of control over one's body and even one's mind, which further worsens the panic attack. Often panic attacks start in adolescence and young adulthood and frequently they are triggered by relationship events and social situations. But if they remain untreated, they can spread out and become 'generalized'. They can reach a point where they even occur when someone is at home lying in bed or after waking up at night. In the extreme, this can lead to a situation in which a patient is not only house but also bed bound.

Certainty and Security

Under the surface of the symptoms of anxiety and panic attacks there often a perceived deficit of certainty and security in one's life. As babies and small children learn to rely on their interactions with others, especially primary caretakers, to meet their needs, they build up a sense of safety regarding the world around them and a secure sense of self. As we figure out the 'rules of daily life' as children we learn to be reasonably in the world. Things might still be unpredictable at times, but in a caring and supportive environment, unpredicted events, whether good or bad, are seen as a fact of life that one might not be able to control, but that one cope with. In an environment where individuals are less able to deal with such events,

a greater sense of uncertainty and a greater susceptibility to anxiety develops, especially if there are also biological factors present. It ultimately comes down not to the actual level of control one has over external and internal events, such as the functions of the own body, but the perceived need for it. Yielding control can be quite effective in regaining control over life in a more general sense.

Sanderson and co-workers tested in a study the notion that a sense of control can mitigate anxiety and panic attacks caused by the inhalation of 5.5% carbon dioxide (CO₂)—enriched air. (Sanderson, Rapee, & Barlow, 1989) Twenty patients with panic disorder inhaled a mixture of 5.5% CO₂-enriched air for 15 minutes. All patients were instructed that illumination of a light directly in front of them would signal that they could decrease the amount of CO₂ that they were receiving, if desired, by turning a dial attached to their chair. For ten patients, the light was illuminated during the entire administration of CO₂. For the remaining ten patients, the light was never illuminated. In fact, all patients experienced the full CO₂ mixture, and the dial was ineffective. When compared with patients who believed they had control, patients who believed they could not control the CO₂ administration (1) reported a greater number of DSM-III—revised panic attack symptoms, (2) rated the symptoms as more intense, (3) reported greater subjective anxiety, (4) reported a greater number of catastrophic cognitions, (5) reported a greater resemblance of the overall inhalation experience to a naturally occurring panic attack, and (6) were significantly more likely to report panic attacks. (Sanderson et al., 1989) Thus it seems that the subjective amount of control a patient has over the level of anxiety influences the experienced anxiety. Clinically, it is often observed that if a patient carries a relatively fast acting anxiolytic in their pockets, the additional sense of control can reduce the occurrence of panic attacks. It is often the anxiety about becoming anxious or suffering a panic attack which is the most debilitating feature of more pronounced anxiety and panic attacks.

Society has developed several ways to deal with anxiety and reduce uncertainty. Many human endeavours aim to provide a greater sense of safety. Laws and scientific progress deal with both, uncertainty in people and uncertainty in the natural world. However, in generalized anxiety and panic attacks, it is less a certainty in the outside world than in the inside world which individuals with anxiety strive for, and it is here that psychotherapy often takes its starting point.

Meaningful Relationships

A message is meaningful if it has a degree of novelty and can bring about a change in the person receiving the message. Relationships are meaningful if there is mutual understanding and empathy, but also if there is an exchange of information that benefits both over the long-run. For someone suffering from anxiety it may not be easy to communicate to an extent that could help against the anxiety, which can prolong the latter. Reducing perceived dangers from participating in interactions with others can be achieved by shifting the focus away from the own person, making other people's comments not about the own person and realising it is OK to say 'no'. This can be quite easily resolved through the communication work in the therapeutic

session by developing awareness for these patterns, reflecting on them and working out modifications or replacing them with other patterns in a playful and experimental way.

Meaningful relationships with other and with oneself help to counteract anxiety because the individual feels a higher degree of efficacy in the world and with respect to oneself. Meaningful communication reconnects the individual with others, but it also aids in self-regulation and gives the individual a greater sense of being effective in taking care of oneself through the interactions with others.

Values and Interests

The other important element is finding not only the strength in oneself but also the direction to proceed in the life. Often there are many paths that can be taken, which confuses people and causes anxiety. Without a sense of one's true values, interests and aspirations it is more difficult to make the relevant decisions in life that lead to greater happiness. If one's sense for one's own values and fundamental interests and aspirations is compromised because of losses of connection with the rational and emotional self, stress, anxiety and burnout can ensue. It is like running in place without getting anywhere, while having a strong desire to get somewhere.

True values, part biology, part social learning from other human beings, means a fundamental belief that acting according to these values and interests and attaining one's aspiration will really mean happiness in the long run. In anxiety, these values and fundamental interests are out of sync with our lives.

Inner Conflicts

Anxiety is caused by inner conflicts, which in the cognitive behavioural therapy tradition are assumed to be conscious or 'near-conscious', while the psychodynamic or psychoanalytic psychotherapy traditions see most of it in the domain of the unconscious. This largely explains the differences in treatment times between the two approaches, but on a theoretical level both can complement each other quite well. Fundamentally the causes are difficulties in communicating one's underlying needs and wishes in a way that subjectively strengthens rather than weakens a relationship out of a fear of further loss. This also makes the internal conflicts persist. Our communication with the people in our lives has an impact on how we talk to ourselves, because they provide crucial feedback to us. When our social interactions become meaningless, our sense of shaping our world in a way that makes us feel secure and happy suffers.

Effective mental functioning requires that cognition be protected from emotional conflict due to interference by task-irrelevant emotionally salient stimuli. The neural mechanisms by which the brain detects and resolves emotional conflict are still largely unknown, however. Using functional magnetic resonance imaging (fMRI),

Etkin et al found that activity in the amygdala and dorsomedial and dorsolateral prefrontal cortices reflects the amount of emotional conflict. By contrast, the resolution of emotional conflict is associated with activation of the rostral anterior cingulate cortex. Activation of the rostral cingulate is accompanied by a simultaneous and correlated reduction of amygdalar activity. These data suggested that emotional conflict is resolved through top-down inhibition of amygdalar activity by the rostral cingulate cortex. (Etkin, Egner, Peraza, Kandel, & Hirsch, 2006). Interestingly, the amygdala also plays a significant role in the triggering and maintenance of anxiety.

Resolving emotional conflicts is thus an important technique to lower anxiety. Often, one may not be aware of these emotional conflicts. Particularly in stress or burnout situations, the focus is on survival in a job, a relationship or everyday life rather than on self-exploration and connecting emotionally with oneself. The therapeutic interaction can be helpful to provide the space and the sense of safety to explore and reconnect emotionally. While at first this can increase the anxiety level, within weeks of consistent work the anxiety levels often drop dramatically, even before concrete external adjustments can be made in life.

Self-Talk

When I refer to 'talking to oneself' I do not mean literally talking to oneself in the street but bouncing back and forth thoughts in one's head, observing one's thought process and reflecting on it. This requires the exchange of highly complex information in even more complex webs of networks of nerve cells in the brain. Since our brain is a highly complex network of ever smaller networks of nerve cells it allows the brain to process information in parallel. This is the reason why we can 'listen' to our own thoughts. Brain cells are in contact with other brain cells and they can alter the properties of their own connections depending on the information they transmit. Medication can alter certain types of transmissions in this system, but if we want to be more specific, we have to expose ourselves to meaningful information which the brain can use to refigure itself. This is essentially what psychotherapy does. As many empirical studies have shown, psychotherapy can bring about changes in connectivity and activation of the brain, which in turn can have a lasting effect on certain conditions, such as anxieties and panic attacks.

Three Steps

The first step is to become aware of situations that trigger anxieties and panic attacks, such as relationship problems or work-related stress. But these problems might not always be obvious, and they might not even explain the anxiety. Problems in a relationship or shyness in social situations are normally not the ultimate explanation for anxiety or panic attacks. We need to analyse in the specific case why losing a relationship causes such threatening fears as anxieties or panic attacks suggest. Sometimes it is worthwhile taking a look

into one's past and reconstruct how an individual dealt with his or her environment as a child or adolescent and how the environment dealt with the individual. At other times, it may be important to 'dissect' the thought patterns in the here and now and to try to find out what they could mean. "If I leave the house I might have to figure out what I really want to do in life. "If this relationship breaks up I might have to figure out what I need and what I want, who I am, who I want to be with ..." and so on. This step is about better understanding one's needs, values and aspirations, and thus oneself.

The second step is to determine if the current approach, such as avoidance or negation, is the best strategy. It always never is. But this does not mean that one has to radically alter one's current lifestyle or social life, though in special cases it might. The actual life we have starts in our head, so it is first and foremost about determining the questions that matter to oneself and how to approach them. This is actually easier than most people think, because it is not so much about having certain answers but about learning how to think and communicate in novel ways. Change usually means widening one's mental repertoire, not narrowing it. The more effective tools are in our toolbox and the more meaningful information we have access to, the better will be our answers and decisions.

The third step is to act according to this novel information. This might sound like a tall order in the face of fears, anxieties and panic attacks, but once someone reaches this stage, the hurdles are often diminished or gone altogether. The fears usually disappear during the first and the second step. The reason is that we are usually more afraid of an uncertain ill-defined event than a certain defined event. When you are facing a threatening event, the uncertainty about an unlikely ill-defined outcome can be more painful than the certainty about a certain well-defined event. The certainty of death does not disturb people nearly as much as not knowing how they will die.

Happiness

The goal is not absolute certainty in life but the attainment of happiness. Anxiety does not necessarily mean a shift in the balance between happiness and writing a meaningful story for one's life, rather, it often is a wake-up call for us to re-evaluate who we are and what we really want in life to make us happier.

Most people want to lead lives which feel true to themselves for the simple reason that they believe it will make them happy. The only certainty that really helps against anxiety is the certainty that one follows one's own path. To help a patient reach this path and follow it with confidence is an important objective of psychotherapy and counselling.



Dr. Jonathan Haverkamp, M.D. MLA (Harvard) LL.M. trained in medicine, psychiatry and psychotherapy and works in private practice for psychotherapy, counselling and psychiatric medication in Dublin, Ireland. He also has advanced degrees in management and law. The author can be reached by email at jonathanhaverkamp@gmail.com or on the websites www.jonathanhaverkamp.ie and www.jonathanhaverkamp.com.

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