

Short Communication

Understanding Fear and Anxiety: Etiology, Symptoms, Treatment and Overcoming Fear

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Abstract

Fear is known as a personal alarm system and it's perceived as either positive or negative reactions, in which the body prepares itself to either confront danger or escape/avoid the threat. The etiology of fear may develop from a complex of risk factors (genetics, personality, brain chemistry and life events). To overcome fear there are thousands of treatment options; some work better than others and the results depend on each individual. The typical treatments consist of pharmacotherapy, psychotherapy, complementary treatments (natural/alternative treatments) and lifestyle changes. The combination of pharmacotherapy and psychotherapy is highly effective in treating anxiety. Counseling a special therapist remain the best efficacy way to overcome fear since it affect the way people react to some situations by recognizing and changing thoughts and limiting partial thinking that activate anxiety. Anxiety situation takes years to form therefore it will take some time to eliminate it. But no matter how severe it is, a person could recover from it.

Keywords

- Fear
- Anxiety
- Avoidance
- Thought

INTRODUCTION

Fear is something good that keeps people aware from surrounding dangers and almost everyone had a fear of something [1,2]. It could be the fear of being alone, getting ill, darkness, death, airplane, elevator, spiders. They are thousands or may be even millions of people in the world that are struggling with fear [3]. One study had showed that the global prevalence of anxiety ranges between 0.9% and 28.3% [4]. Fear is known as the personal alarm system and it is divided into two stages: biochemical and emotional [2]. The biochemical forms are characterized by the physical reactions to fear; the bodies respond by sweating, increase in heart rate, as well as high adrenaline levels [2]. The emotional response, on the other hand, consist of feelings of anger, sadness, fright and various stress reactions [2]. Fear may be perceived as either positive or negative reactions [2]. The positive response is related to coping with strategies developed by individuals to contract fear [1]. While, the negative response is related to the avoidance of fear that could lead to the developing a fear of the fear. Most people tend to experience fear only during specific situations perceived as scary [1,5]. People may develop specific fears as a result of learning by undergoing a frightening experience (traumatic situation) or observing fear in others [6].

Various terms are used to express the complex emotional/behavioral responses such as fear, concern, worry, trepidation, nervousness, disquiet, solicitude, phobia, edginess, anxiety, terror, agitation, and apprehension. This rich vocabulary express

the importance of the feelings of fear in human however a difficulty exist in defining each psychological terms since they overlap together in describing fear. Fear and anxiety are the two frequently utilized terms in literature. The primary diagnostic tool used in psychology, the Diagnostic and Statistical Manual of Mental Disorders V (DSM-V) defined anxiety as a disorders that share features of excessive fear and anxiety and related behavioral [7]. Researchers had always tried to specify these terms, however a confusion still exist. Fear is the emotional response to real or perceived imminent threat (reaction to a real stimulus), whereas anxiety is anticipation of future threat [7]. Anxiety is generally similar to fear except the lack for an identifiable source of threat (reaction without a stimulus) [8,9]. Fear is more often associated with a thoughts of immediate danger, and escape behaviors, and anxiety more often associated with muscle tension and vigilance in preparation for future danger and cautious or avoidant behaviours [7]. However, when fear of threats turns into an uncontrollable or unavoidable situation, the emotion of fear tends to convert to anxiety emotion [1]. Anxiety involves extreme fear or worry about a certain situation. The anxious mind will be focusing on fearful thoughts instead of focusing on a fearful situation in the real world [10]. The mind will get the body into a state of readiness to deal with the threat but this time the threat is a thought from the imagination [10]. The worrying thought that overwhelms the mind will turn into more worrying thoughts and it will lead to a misuse of the imagination [11]. The mind will consider various options, furthermore, ideas like worrying about the future and the problem become unendurable [10].

Etiology of fear

The etiology of fear may develop from a complex of risk factors (genetics, personality, brain chemistry and life events) and cause deterioration in social and daily activities [5].

Genetics

A convincing evidence had revealed that anxiety are influenced by genetic and hereditary factors [12-15]. Numerous genes in interaction with each other produce vulnerability to the disorder [16]. Twin studies had proved this notion, by comparing between monozygotic twins and dizygotic twins. A large scale study done on 2163 female twins in the US found that familial phobias appeared to result from genetic rather than environmental factors [13]. A study done by Hettema et al., revealed two genetic factors common across anxiety disorders one related to generalized anxiety disorder, panic disorder and agoraphobia and the other gene related to specific phobias [17]. Thus, twin studies of anxiety had consistently indicated that approximately 50% of the variance can be attributed to genetic factors [18]. In addition, evidence had shown that a number of chromosomal regions are linked to anxiety including panic disorder, phobias and anxiety traits [19], and for specific phobia a chromosome 14 risk locus had been identified [20]. Also, the expression of genes in the amygdala and hippocampus had been found related to fear conditioning [21].

Temperament

Temperaments reflect a personality traits, influencing behavior and emotion from early childhood and being observable throughout the individual's life span [22,23]. Thus, childhood temperaments constitute a good predictor of adult personality and constitute a fundamental factor in psychological adjustment [24,25]. Several studies have linked early child temperament to the development of anxiety disorders in adulthood [26-28]. Genetic studies had shown that certain genetic substructures of temperaments traits may be shared with the symptoms of anxiety disorders [29,30]. Also, similar characteristics of temperaments had been found in anxiety disorders and classified as "anxious temperaments" (fearfulness, neuroticism, negative affectivity) [31,32]. However more research is warranted to clearly understand the role of temperament in the development of fears and anxiety.

Neurobiological basis

The neurobiological mechanisms underlying anxiety disorders is based on two systems: the nervous system and the endocrine system. The nervous system connects with the body through electrical signals while the endocrine system communicates through chemical messengers.

The nervous system work on the sensory systems of the brain (auditory, visual, and somatosensory), that form an important circuit that transport direct information relevant to the experience of fear or anxiety. The sensory information enclosed to fear or anxiety inducing stimulus is transmitted from peripheral receptor cells to the dorsal thalamus [33]. The thalamus relays sensory information to primary sensory receptive areas of the cortex, which, in turn, project to cortical association areas [34,35]. The

cortical association areas of visual, auditory, and somatosensory systems send projections to other brain structures, including amygdala [36,37]. Subcortical structures, which are more involved in affective, somatic responses and behavioral receives integrated information from all sensory systems. The neuronal relations between the amygdala and cortical regions, provide a context for launching the coping behaviors based on the nature of the threat and prior experience.

Sympathetic and parasympathetic neural systems are the basis of anatomic changes produced by anxiety and Fear. The sympathetic system activation produce an increase in blood pressure, sweating, pupil dilatation and heart rate. The activation of the parasympathetic neural systems of the hypothalamus promotes the relief of a variety of hormones and peptides and could be related to visceral symptoms such as gastrointestinal and genitourinary disturbances [33].

The most important chemical messenger activated during anxiety is neurotransmitters. The most common neurotransmitter related to anxiety is serotonin and it work in improving mood, appetite and sleep. A decreased level of serotonin is well found in people with anxiety. In addition to serotonin, GABA (gamma-aminobutyric acid) has also been related to anxiety. GABA had an impact in relaxing the body by slowing neural transmission down and calming the brain. Anxious people had a decreased level in GABA [38].

Environmental factors

Childhood trauma and stressful life events is related to an increase in anxiety disorders. A prolonged and severe periods of stress including physical and mental abuse, the death of a loved one, desertion, divorce or isolation are factors related to the development of anxiety disorder [39]. Studies had shown that childhood parental loss or separation had been related to various forms of psychiatric disorders [40,41]. Childhood sexual abuse had been found to be related to general anxiety disorder and panic disorder [42]. A meta-analysis done by Hettema et al. 2001 showed that environmental factors are involved in predisposing people to anxiety [15].

Symptoms

The DSM-V defined a person as having an anxiety disorders when too much anxiety or worry over more than six months occurred, inability to manage the symptoms and at least three of the following symptoms occurred: sleeping disorder which aggravates the level of anxiety since a person would always feel fatigue and unrefreshed in the morning [7]. The body responds by being tense and nervous all the time (irritability and muscle tension). Restlessness, tires easily, feeling of danger, panic or terror followed by difficulty of focusing or thinking clearly about anything else than the worried thought will appear. Other symptoms include trembling, rapid breathing, sweating, gastrointestinal problems and the obsession for certain ideas [1].

Treatment

There are thousands of treatment options; some work better than others and the results depend on each individual [10]. The evidence based treatments for anxiety disorders suggest

the following treatment: pharmacotherapy and psychotherapy treatments. A combination of medication and psychotherapy is well effective. The treatment decision vary from person to other depending on the severity of illness. Most people with an anxiety could be treated by the help of a professional care, however medications will be needed for persons with severe anxiety, having more than one anxiety disorder or suffering from coexisting comorbidities such as depression or diabetes [43].

Pharmacotherapy treatment: Four major classes of medications are used to treat anxiety disorders: SSRI (selective serotonin reuptake inhibitor), SNRI (serotonin-norepinephrine reuptake inhibitor), tricyclic antidepressant, and benzodiazepine. The SSRI is the first line of pharmacological treatment that have an effect in both short term and long term treatment of anxiety and are in generally well tolerated [43]. However, SSRI had adverse effects, including increased nervousness, insomnia, nausea and sexual dysfunction [44,45]. Another classes of medication used is the SNRI (serotonin-norepinephrine reuptake inhibitor), that have an impact in short-term and long-term treatment of generalized anxiety disorder. Other medications used are the tricyclic antidepressants (TCAs) are effective in some anxiety disorders, but TCAs are associated with a greater side effects than either SSRIs or SNRIs. It should be only used after non-response or poor tolerance to the initial treatment with SSRI and SNRI. The benzodiazepine is useful for the treatment of patients with panic disorder, generalized anxiety disorder and social anxiety disorder. However, it could cause cognitive impairment and sedation and dependence could occur [43].

Psychotherapy treatments: The psychotherapy had a largely consistent evidence of efficacy in the treatment of anxiety disorders. It should only be done by trained and supervised staff, able to demonstrate that their clinical practice adheres to evidence based treatment protocols.

Various forms of psychotherapy exist, such as exposure therapy, Dialectical Behavioral Therapy (DBT), Interpersonal Therapy and cognitive behavioral therapy (CBT). The CBT is highly used and effective, and focuses on changing thinking and behavior patterns. A range of 12 to 16 weeks may be needed in treatment of anxiety disorders, depending on the individual. In this type of therapy the patient is actively involved in his or her own recovery, learn skills during therapy sessions that are useful throughout life and must practice repeatedly to see improvement. However, the DBT incorporates cognitive-behavioral techniques with concepts of meditation. In DBT individual and group therapy are done in order to learn tolerating stress, regulating emotions as well as learning skills for interpersonal usefulness [43].

Overcoming fear and anxiety

The quickest solution to overcome fear is to escape and avoid situations in which the feeling appears. This solution tends to work in the short term, however, in the long term, the avoidance will become a bigger problem and the fear will become unavoidable [11]. To minimize the anxiety symptoms, almost all individuals tend to immediately take medication. However, drugs have side effects that affect the overall health; taking medication would mask the symptoms not eliminate them. Therefore, medication could help in the short term, however, at the long

term, individuals need to develop coping strategies to face their problems. The recommended treatment by the evidence based medicine are essential in managing anxiety, still certain techniques exist that could help release the symptoms such as changes in lifestyle daily activities (routine exercises, avoiding alcohol and other substances, stopping the consumption of caffeine drinks or smoking and relying on a healthy diet), relaxation techniques, stress management and support network. However, counseling a special therapist remain the best efficacy way to overcome fear since it affect the way people react to some situations by recognizing and changing thoughts and limiting partial thinking that activate anxiety [10]. This kind of therapy would help in knowing the origin of fear and thoughts which creates other thoughts and disturbs the attitude. These thoughts comes exclusively from the past/ history of the individual, familiar relationships and the developments and accumulations over the life course to create the fear. Therefore, the thoughts will be brought from the past to the surface so that individuals free themselves from the burden and consequently stop experiencing anxiety. Learning how to self-manage in a fearful situation will help overcoming fear. It resembles to a skill that can be taught and improved with practice and time. It will take practice at the beginning to visualize confident and completely lacking fear. Confidence itself does not guarantee success, but approaching a situation with confidence can help [3]. When the situation becomes easy, the level of fear will decrease. Changing the way of thinking about a situation, can change the response to a fearful situation.

Anxiety situation takes years to form therefore it will take some time to eliminate it. But no matter how severe it is, a person could recover from it [3]. The prevalence of recovery vary widely since they is a lack of standardization of criteria and assessment instruments. A study done by Fisher et al., found that the recovery rate was 40% in patients with generalized anxiety disorder [4]. A study done by Bruce et al., found that the probability of recovering from generalized anxiety disorder was 0.58 and the probability of recurrence in patients who recovered was 0.45 over a period of 12 years [46]. Another study done by Rodriguez and colleagues, found that the probability of recovering in primary care patients from GAD was 0.39 over 2 years [47].

CONCLUSION

Fear is a false illusion created by the imagination to protect the person from a danger. A person must choose either to run away, avoid fear or to face fear. While walking through fear, these choices will be experienced. By choosing the avoidance, the person will be stuck into their own imagination and they will be using lots of narcotics to decrease symptoms. However, by facing fear the person will pass by a long way where he should support difficult situations but he will be cured.

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REFERENCES

1. Gray JA, The psychology of fear and stress. 2nd Edn. US: CUP Archive. 1987.

2. Lisa Fritscher. The psychology of fear. 2017.
3. Jeffers SJ. Feel the fear and do it anyway. Random House. 2012.
4. Fisher PL, Durham RC. Recovery rates in generalized anxiety disorder following psychological therapy: an analysis of clinically significant change in the STAI-T across outcome studies since 1990. *Psychol Med*. 1999; 29: 1425-1434.
5. Shpancer N. Fear Is Nothing to Be Feared. A phenomenon known as 'fear of fear' is at the core of most anxiety disorders. 2017.
6. Öhman A, Mineka S. Fears, phobias, and preparedness: toward an evolved module of fear and fear learning. *Psychol Rev*. 2001; 108: 483-522.
7. Association AP. Diagnostic and statistical manual of mental disorders (DSM-5®). 2013: American Psychiatric Pub.
8. Marks IM. Fears, phobias, and rituals: Panic, anxiety, and their disorders. Oxford University Press. 1987; 682.
9. Taylor S, Rachman S. Stimulus estimation and the over prediction of fear. *British Journal of Clinical Psychology*. 1994; 33: 173-181.
10. Psychology solution. Fear of fear. 2018.
11. Schmidt NB. Exploring Human Freeze Responses to a Threat stressor. *J Behav Ther Exp Psychiatry*. 2008; 39: 292-304.
12. Torgersen S. The nature and origin of common phobic fears. *Br J Psychiatry*. 1979; 134: 343-351.
13. Kendler KS. Generalized anxiety disorder in women. A population-based twin study. *Arch Gen Psychiatry*. 1992; 49: 267-272.
14. Kendler KS. Genetic risk factors for major depression in men and women: similar or different heritabilities and same or partly distinct genes?. *Psychol Med*. 2001; 31: 605-616.
15. Hettema JM, Neale MC, Kendler KS. A review and meta-analysis of the genetic epidemiology of anxiety disorders. *Am J Psychiatry*. 2001; 158: 1568-1578.
16. Morris Rosendahl DJ. Are there anxious genes?. *Dialogues Clin Neurosci*. 2002; 4: 251-260.
17. Hettema JM, Prescott CA, Kendler KS. A population-based twin study of generalized anxiety disorder in men and women. *J Nerv Ment Dis*. 2001; 189: 413-420.
18. Bouchard TJ. Sources of human psychological differences: The Minnesota study of twins reared apart. *Science*. 1990; 250: 223-228.
19. Villafuerte S, Burmeister M. Untangling genetic networks of panic, phobia, fear and anxiety. *Genome Biol Evol*. 2003; 4: 224.
20. Gelernter J. A chromosome 14 risk locus for simple phobia: results from a genomewide linkage scan. *Mol Psychiatry*. 2003; 8: 71.
21. Mei B. Distinct gene expression profiles in hippocampus and amygdala after fear conditioning. *Brain Res Bull*. 2005; 67: 1-12.
22. Buss A, Plomin R. Temperament: Early developing personality traits. Theory and measurement of EAS. 1984; 98-130.
23. Strelau J, Zawadzki B. Fearfulness and anxiety in research on temperament: Temperamental traits are related to anxiety disorders. *Personality and Individual Differences*. 2011; 50: 907-915.
24. Caspi A. The child is father of the man: personality continuities from childhood to adulthood. *J Pers Soc Psychol*. 2000; 78: 158-172.
25. Rothbart MK, Ahadi SA, Evans DE. Temperament and personality: origins and outcomes. *J Pers Soc Psychol*. 2000; 78: 122-135.
26. Goldsmith HH, and Lemery KS. Linking temperamental fearfulness and anxiety symptoms: A behavior-genetic perspective. *Biol Psychiatry*. 2000; 48: 1199-1209.
27. Muris P, Ollendick TH. The role of temperament in the etiology of child psychopathology. *Clin Child Fam Psychol Rev*. 2005; 8: 271-289.
28. Edgar PK, Fox NA. Temperament and anxiety disorders. *Child Adolesc Psychiatr Clin N Am*. 2005; 14: 681-706.
29. Dragan WL, Oniszczenko W. The association between dopamine D4 receptor exon III polymorphism and intensity of PTSD symptoms among flood survivors. *Anxiety Stress Coping*. 2009; 22: 483-495.
30. Oniszczenko W, Dragan WL. Association between dopamine D4 receptor exon III polymorphism and emotional reactivity as a temperamental trait. *Twin Res Hum Genet*. 2005; 8: 633-637.
31. Rettew DC, Doyle AC, Kwan M, Stanger C, Hudziak JJ. Exploring the boundary between temperament and generalized anxiety disorder: a receiver operating characteristic analysis. *J Anxiety Disord*. 2006; 20: 931-945.
32. Strelau J, Zawadzki B. Fearfulness and anxiety in research on temperament: Temperamental traits are related to anxiety disorders. *Personality and Individual Differences*. 2011; 50: 907-915.
33. Charney DS, Grillon C, Bremner JD. The Neurobiological Basis of Anxiety and Fear: Circuits, Mechanisms, and Neurochemical Interactions (Part I). *The Neuroscientist*. 1998; 4: 35-44.
34. Jones EG, Powell TPS. An anatomical study of converging sensory pathways within the cerebral cortex of the monkey. *Brain*. 1970; 93: 793-820.
35. Mesulam MM, Van Hoesen GW, Pandya DN, Geschwind N. Limbic and sensory connections of the inferior parietal lobule (area PG) in the rhesus monkey: a study with a new method for horseradish peroxidase histochemistry. *Brain Res*. 1977; 136: 393-414.
36. Turner BH, Mishkin M, Knapp M. Organization of the amygdalopetal projections from modality-specific cortical association areas in the monkey. *J Comp Neurol*. 1980; 191: 515-543.
37. Vogt BA, Miller MW. Cortical connections between rat cingulate cortex and visual, motor, and postsubicular cortices. *J Comp Neurol*. 1983; 216: 192-210.
38. Steimer T. The biology of fear-and anxiety-related behaviors. *Dialogues Clin Neurosci*. 2002; 4: 231-249.
39. Hettema JM, Prescott CA, Myers JM, Neale MC, Kendler KS. The structure of genetic and environmental risk factors for anxiety disorders in men and women. *Arch Gen Psychiatry*. 2005; 62: 182-189.
40. Harris T, Brown GW, Bifulco A. Loss of parent in childhood and adult psychiatric disorder: The role of lack of adequate parental care. *Psychol Med*. 1986; 16: 641-659.
41. Tennant C. Parental loss in childhood: its effect in adult life. *Social psychiatry: Theory, methodology, and practice*. 1991; 305-327.
42. Fergusson DM, Horwood LJ, Lynskey MT. Childhood sexual abuse and psychiatric disorder in young adulthood: II. Psychiatric outcomes of childhood sexual abuse. *J Am Acad Child Adolesc Psychiatry*. 1996; 35: 1365-1374.
43. Baldwin DS, Anderson IM, Nutt DJ, Allgulander C, Bandelow B, den Boer JA, Christmas DM, Davies S, Fineberg N, Lidbetter N, Malizia A, et al. Evidence-based pharmacological treatment of anxiety disorders, post-traumatic stress disorder and obsessive-compulsive disorder: a revision of the 2005 guidelines from the British Association for Psychopharmacology. *J Psychopharmacol*. 2014; 28: 403-439.
44. Serretti A, Chiesa A. Treatment-emergent sexual dysfunction related

- to antidepressants: a meta-analysis. *J Clin Psychopharmacol.* 2009; 29: 259-266.
45. Gartlehner G, Hansen RA, Morgan LC, Thaler K, Lux L, Van Noord M, et al. Comparative benefits and harms of second-generation antidepressants for treating major depressive disorder: an updated meta-analysis. *Annals of internal medicine.* 2011; 155: 772-785.
46. Bruce SE, Yonkers KA, Otto MW, Eisen JL, Weisberg RB, Pagano M, et al. Influence of psychiatric comorbidity on recovery and recurrence in generalized anxiety disorder, social phobia, and panic disorder: a 12-year prospective study. *Am J Psychiatry.* 2005; 162: 1179-1187.
47. Rodriguez BF, Weisberg RB, Pagano ME, Bruce SE, Spencer MA, Culppepper L, et al. Characteristics and predictors of full and partial recovery from generalized anxiety disorder in primary care patients. *J Nerv Ment Dis.* 2006; 191: 197.

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