Acta Scientific MEDICAL SCIENCES (ISSN: 2582-0931)

Volume 10 Issue 6 June 2026

Review Article

Anxiety of Students – A Fact of Emotion

Basudha De*

Tripura Santiniketan Medical College, Madhuban, Ranirkhamar, Agartala, West Tripura, India

***Corresponding Author:** Basudha De, Tripura Santiniketan Medical College, Madhuban, Ranirkhamar, Agartala, West Tripura, India.

Received: April 30, 2026

Published: May 31, 2026

DOI: 10.31080/ASMS.2026.10.2243

Abstract

Mind is a subtle matter that is self evident and having different rates of vibration and the soul of it is the source of intelligence. Anxiety is the simply prolonged fears or special forms of fear. Mind – Body – Anxiety is connecting each other without any plan automatically. Anxiety is all about worrying and can become a disorder when excessive fear approaches in daily life style. Anxiety occurs to many students, young youths in these days due to excessive watch time in digital screens and poor sleep, considering pressure in course/job etc., where emotion does work. Self remedial steps may be adopted for quick recovery. Anxiety gets somehow introduced to physiology of learning. Hippocampus undergoes significant structural and functional changes with chronic stress like impaired neurogenesis. Neurochemicals are also showing their activities on anxiety. The goal of managing anxiety is to regulate it. Treatment often includes psychotherapy and medications.

Keywords: Mind; Anxiety; Emotion; Disorders; Neurochemicals; Remedy

Introduction

Adults are not only the sufferer from Anxiety, but irrespective to age and sex, employees to owner and even students cannot deny at least for a moment their mental state without anxiety. Anxiety is explained in different sources more related to non-medical issues, which is here tried to be explained from the views of a medical learner. Mind – Body – Anxiety is connecting each other without any plan automatically.

What is mind? [1]

Brain wants rest, but not the mind. Mind existence is no where seen and its magnitude cannot be measured. Mind is not confined in a space to exist. Mind is a subtle matter that is self evident and having different rate of vibration and the soul of it is the source of intelligent. It is a collection of desires arising from contact with different objects. It is also a collection of feelings aroused by worldly botherations and ideas gathered from different objects. Some of the old desires and feelings are constantly departing from their store house, the mind, and new ones are replacing them.

Mind is not only made daily but always made. It constantly changes. It is intelligent when compared with senses. The efferent nerves bring the sensation from the periphery of the spinal cord. These sensations then passed to the medulla oblongata at the back of the head, where the fibers decussate. From there, they pass onto the superior frontal gyrus. The mind feels the sensation and sense motor impulses through the efferent nerves to the extremities. Mind is the only excretion of the brain. Thinking, Planning, Feeling, Knowing are the various activities that are going on in the mind. Volition brings all the mental faculties into play. An individual be

able to know by introspection what exactly is going on at different times in the mind.

What is anxiety?

An old unforgettable past mostly faced by intellectuals was the highlights a day before examinations, where being a student gave lots of acquisition to the idea of conducting an examination. This is marked by anxiety and depression, which eventually proves events like forgetting topics learned or revised by several times due to over thinking and stress. Anxiety often effects menstruation of female students by disrupting hormonal balances and proves their delaying and triggers serious cramping pain [2].

Anxiety is a smoldering fire. Anxiety is not a foe and can be a concern which helps to anticipate the consequences of behavior and leads to much of the learning until it is in limit. Anxiety is the simply prolonged fears or special forms of fear. Anxiety manifests itself in a dread that something harmful will happen or in a feeling of helplessness, futility and frustration. Fear is a response to an obvious and external danger, but anxiety is a response to danger within the individual to his/her own conflicts and difficulties to subjective danger. Anxiety is a special kind of fear which is self esteemed. The "irrational" fear is experienced even though there is no real danger. The fact it is a reaction to some inner stress. But it is disconnected from that stress and connected with an external situation. A student may be disliking his/her father or teacher on account of some disagreement, there is no fear present immediately but later. He meets a large animal who may represent the father or the teacher of whom the child is afraid. An internal danger or threat has been displaced by an external object and the child develops an abnormal fear of large animals. A good many of our "irrational" fears are thus projected or displaced from an inner disturbance to an outer situation [3].

Causes of anxiety

Anxiety is all about worrying and can become a disorder when excessive fear approaches in daily life style. The main players which elicit this emotion are basically an approach which gets eventually adopted by behaving pattern of the people governed by or might the life events concerned with stress and traumatic situations, chronic stress, work load or relational affairs or some long term health conditions or do intake of caffeine excessively or dealing with certain medications [4].

Mostly social anxiety hits in stronger way and arouses fear in some social situations, fear of being judged or humiliated, over analyzing past, social interactions, avoiding social situations, Blushing or sweating or trembling in social situations, fear of being embarrassed. Over thinking empowers the process of anxiety generation.

Consequences and self approach of recovery

Anxiety highly triggers once confidence level and triggers panic and overtime affects the decision making power and composed thinking. Anxiety embraces difficulty making eye contact or speaking in social situations and makes oneself to feel inferior and low self esteem.

Anxiety occurs to many students, young youths in these days due to excessive watch time in digital screens and poor sleep, considering pressure in course/job etc. Physical signs involves in anxiety like noticeable shaking of hands or voice. Reddening of face or warmth in face, excessive sweating particularly on palms and under arms, fast heart rate and pressure, difficulty in swallowing [5].

Self remedial steps for quick recovery-

- Practice deep breathing daily
- Keep physically active
- Take ample amount of sleep
- Decrease screen time
- Limit caffeine intake
- Connect with your hobbies
- Spend yourself a time with nature
- Look into positive aspect
- Have a never give up spirit
- Have a healthy diet routine
- Spend time with friends and loved ones

Physiology involved in anxiety

Anxiety when gets into practice can become a behavior. It gets somehow introduced to physiology of learning. There are two types of learning patterns called reflex and incidental, where the former is by change in behavior not immediate and is grouped further in it

into associative learning and non-associative learning. Associative learning has classical and operant type and thus anxiety is a kind of operant learning. Operant conditioning is in association between stimulus and behavior change with reinforcement. Experimentally it is shown with a rat in cage. In reward conditioning when ever rat press lever of cage. It was given pellet of food, so rat continued to press lever many times. In aversive conditioning whenever rat press lever it was given electrical shock so rat stops pressing lever. It is also due to formation of new synaptic connection in nervous system.

In case of classical conditioning an unconditioned response meets to a conditioned stimulus when it is continuously paired with unconditioned stimulus. It is also called Pavlov's conditioning. The classical situation is initially a neutral situation which is paired with a frightening experience leading to an anxiety response. Overtime, the situation triggers itself. Anxiety can be operant learning through a process known as negative reinforcement. This is somewhere related to avoidance behavior which is strengthen and repeated overtime because they successfully remove the over thinking is best medicine to remove stress [6].

In normal anxiety, increase in muscle tension and activation of sympathetic nervous system witnessed in individuals which further triggers increase in heart rate, blood pressure, sweat gland activity, enhanced respiration, an increase in bladder and gastrointestinal activity. This all occurs under autonomic stimulation. In neuro-endocrine response, there is increase epinephrine and nor-epinephrine secretion along with cortisol, GH, prolactin, which prepares the body for immediate action like rapid breathing, faster heart rate. All these outputs redirect the messages to the brain where neurotransmitters like nor-epinephrine, serotonin, dopamine, GABA play a role and regions like hippocampus and amygdale and HPA axis are hyperactive. Amygdala is responsible for fear and emotional activity during anxiety. Hippocampus puts stimuli in order with past memory in anxiety and shoots a stress response. The hypothalamic pituitary adrenal axis regulates stress response and recollects signals from brain and releases cortisol which increases the rate of metabolism [7].

Anatomical features

It includes Hyperactivation of threat – detection circuits (responses to Perceived danger), Hypoactivation of regulatory circuits, less affective response between emotional and regulatory areas. These are controlled by amygdale, prefrontal cortex, hippocampus and insula, bed nucleus of the stria terminalis. Amygdala receives all the emotional stimuli and unconsciously perceived stimuli. They concerned with panic attacks and of ten generate responses to fearful situations. Pre frontal cortex (PFC) is responsible to provide a check on the activity of amygdale. PFC regulates emotional control. Anxiety and its consequences occur due to reduced PFC activity. The dysfunction allows the amygdale to go unchecked and thus contributing to excessive worry and chronic stress. PFC is well known for planning and decision making and manages emotional balance when encountered with fear or stressful situations.

Hippocampus forms memory to certain situations. It provides understanding about safe and fearful situations. Anxiety associated with altered neuronal excitability and synaptic plasticity in the hippocampus leading to improper balance between inhibitory action and excitatory action. Hippocampus undergoes significant structural and functional changes with chronic stress like impaired neurogenesis. Stress and high level of glococorticoids suppress activity of neurons in the dentate gyrus and thus held mood disorders.

Biochemical and neurotransmitter involvement in anxiety

GABA is an important neurotransmitter in CNS specifically linked to anxiety. Increase in anxiety leads to increased neuronal excitability and reduces GABA levels and thus its works by binding to $GABA_A$ and $GABA_B$ receptors to open $Cl^{(-)}$ channels to make neuron less likely to respond to action potential affected.

Serotonin plays crucial role in emotional processing and anxiety. Anxiety lowers the level of serotonin and halts Serotonin transporter function or receptor sensitivity is implicated. Selective serotonin receptor inhibitors (SSRIs) are first line treatment for anxiety disorders.

Norepinephrine is a key component of body's "fightor flight" response. Anxiety involves hyperactivity in nor-adrenergic system in the floor of fourth ventricle lead too heightened alertness and anxious feeling and basic attacks and post traumatic stress disorder. Medications like beta blockers and SNRIs compensate nor-epinephrine levels and help to manage stress.

Glutamate is an excitatory neurotransmitter. Elevated glutamatergic signaling imbalance and contribute to high anxiety. Dopamine in its role is complex. Dysfunction proves detrimental effects in reward and motivational pathway during anxiety. Neuro peptides and Hormones like Corticotropin releasing factor (CRF), Oxytocin, Cholecystokinin, neuropeptide and neurosteroids help to regulate stress response system [4].

Occurrence of disease during anxiety [8]

- Frequent feeling of impending doom
- Headaches from constant worry and stress
- Increase feelings of irritability
- Rapid, shallow breathing can be more intense with panic attack
- Blood pressure rise
- Heart palpitations, chest pain, light headedness
- Social withdrawal, loss of interest in activities and feelings of guilt or hopelessness
- Feeling wiped out at various points throughout the day and problems in sleeping
- Stomach pains accompanied by nausea and diarrhea
- Can cause loss of libido

Conclusion

Anxiety arises when relationship between individual and others is disturbed. Much of children's anxiety is a feeling of hostility which have when they are thwarted frustrate or threatened. It is a natural response to stress and danger. Prolonged anxiety leads to anxiety disorder and the fear is persistent and grew overtime and leads to problems like depression, insomnia etc. The goal of managing anxiety is to regulate it. Treatment often includes psychotherapy (like CBT: Cognitive Behavioral Therapy) and medications. Strategies include relaxation techniques and reducing caffeine (students if fond of) helps to manage anxiety [9,10].

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