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Anti-Anxiety Drugs and Their Effects: Mechanisms, Therapeutic Applications, Safety Concerns and Emerging Perspectives

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ABSTRACT

Everyday life can be hindered by anxiety disorders, which are serious mental health problems that cause a person to be constantly fearful, anxious, excessively worried, tense, and emotionally unstable, among other symptoms. Anxiolytics are the medications used in treating anxiety that affect the pathways of the CNS responsible for anxiety response. Benzodiazepines, SSRIs, SNRIs, azapirones like buspirone, and beta-blockers are among the various anxiolytic compounds. Benzodiazepines work by increasing the GABA-mediated inhibitory neurotransmission, which helps relieve anxiety quickly. SSRIs and SNRIs are usually used in the long-term controlling anxiety complications. Buspirone is known to affect the serotonin levels, while the beta-blockers reduce some physical symptoms of anxiety. Despite having a lot of benefits in the treatment of anxiety, anxiolytics can be associated with some adverse effects, such as sedation, dizziness, learning difficulties, nausea, and sleep problems. The consequences of these adverse effects should be considered critically after anxiolytic consumption, as sedation, impaired motor activity, and learning difficulties can change the behavior of the patient. When prescribing anxiolytics, it is important to find a proper balance between the effectiveness of the selected drug and potential harm of taking the drug.

Introduction

Mental health has gained immense importance in modern times, with anxiety disorders being among the most common psychological disorders in the world (Bandelow & Michaelis, 2015; Szuhany & Simon, 2022). However, anxiety, as both a psychological and a physiological response to the situations perceived as dangerous or stressful, may be of significance in mild cases. While anxiety can be of adaptive importance because it ensures a person's readiness to face challenges, it starts being medically relevant when it becomes excessive and causes disruption in daily functioning (Szuhany & Simon, 2022). Both psychological and physiological manifestations of anxiety exist, including psychological symptoms like excessive worry, fear, irritability, restlessness, inability to concentrate, panic attacks, and mood swings. Physiological manifestations of anxiety may include increased heart rate, sweating, trembling, soreness, dizziness, headache, gastrointestinal distress, and many others causing activation of the body's stress response (Szuhany & Simon, 2022). Various biological, psychological, environmental, and social factors may contribute to the development of anxiety (Bandelow & Michaelis, 2015). In terms of neurochemical processes, anxiety is associated with altered functioning of neurotransmitter systems responsible for emotions, including fear and stress.Neurotransmitters such as gamma-aminobutyric acid (GABA), serotonin, dopamine, norepinephrine, and glutamate pathways are connected to the neural system involved in anxiety and stress responses (Garakani *et al*., 2020; Nasir *et al*., 2020). That said, the pharmacological modulation of the respective signaling pathways is vital for the management of anxiety disorders.

Anxiety disorders include a wide range of conditions, which are distinguishable from one another. A person with generalized anxiety disorder (GAD) cannot control worrying about everyday life. Meanwhile, panic disorder is characterized by the occurrence of multiple episodes of panic attacks, while social anxiety disorder is associated with feared behavior with regard to social performance situations (Szuhany & Simon, 2022).

Psychotherapy, behavioral techniques, lifestyle changes, and pharmacological treatment may be utilized in therapy. Anxiolytics are performed in order to treat anxiety symptoms through the impact on the central nervous system. Different groups of drugs are utilized depending on the respective needs of therapy, given the fact that these medications differ greatly in terms of their mechanisms of action, time of therapeutic effect appearance, and efficiency (Garakani *et al*., 2020; Strawn *et al*., 2018).

The main groups of drugs used in the treatment of anxiety disorders include benzodiazepines, selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), buses of azapirone type, and beta-adrenergic blockers (Garakani *et al*., 2020). SSRIs and SNRIs are considered first-line pharmacological agents to treat anxiety disorders such as GAD, panic disorder, and social anxiety disorder (Szuhany & Simon, 2022; Strawn *et al*., 2018). Benzodiazepines are characterized by a rapid anxiolytic action, but the danger of experiencing such side effects as sedation, impaired alertness, physical dependence, and withdrawal prevents their use in treating anxiety (Gomez *et al*., 2018; Bandelow *et al*., 2014). However, one should bear in mind that this mode of treatment cannot be judged only based on reduction in symptoms. Adverse effects, cognitive performance impairment, and tolerability of therapy should also be taken into consideration (Strawn *et al*., 2018; Szuhany & Simon, 2022). Thus, the current work aims at examining such aspects of anti-anxiety medications as classification, mechanism of action, and limitations.

Major Classes of Anti-Anxiety Drugs-Group of anti-anxiety drugs does not contain only one set of agents. They may be classified based

on chemical structure, the mechanism of action, their application for the pharmacological classification. The main pharmacological subgroups are represented by benzodiazepines, selective serotonin reuptake inhibitors, serotonin and norepinephrine reuptake inhibitors, azapirones, and beta-adrenergic blockers (Strawn *et al*., 2018; Garakani *et al*., 2020). Different drug types have different effects, properties as well as effectiveness. Therefore, the choice of anti-anxiety drugs depends on the type of anxiety disorder, its severity, and individual patient's condition (Bandelow *et al*., 2017; Garakani *et al*., 2020).

Benzodiazepines-Benzodiazepines rank among the most famous and most common anxiolytic medications. Among such drugs are diazepam, alprazolam, lorazepam, clonazepam, and chlordiazepoxide. Most of the action of the drugs stems from their ability to boost the action of GABA. As a result, benzodiazepines have great speed of action, which makes their use possible for immediate treatment of the symptoms of anxiety (Bandelow *et al*., 2017). Effectiveness of benzodiazepines in clinical practice comes with certain drawbacks. Thus, sedation and sleepiness can hinder people's ability to perform daily activities. Moreover, coordination, attention, memory, and psychomotor skills can be impaired (Baldwin *et al*., 2013). Use of benzodiazepines for too long can lead to addiction or dependency. Abrupt stopping the use of the drugs can bring withdrawal symptoms (Baldwin *et al*., 2013). Hence, efficiency of benzodiazepines must be counted against these side effects and potential dependency while considering possibility of their long-term use (Bandelow *et al*., 2017; Soyka, 2017).

Selective Serotonin Reuptake Inhibitors-Fluoxetine, sertraline, escitalopram, and paroxetine, are examples of SSRIs. SSRIs work by mainly serotonergic actions, which involves the inhibition of SERT, hence decreasing serotonin reuptake and increasing serotonergic transmission (Strawn *et al*., 2018; Garakani *et al*., 2020). SSRIs are very useful in long-term treatment of several anxiety disorders and are preferred over benzodiazepines for long-term treatment, as they have a better profile regarding dependence (Bandelow *et al*., 2017, Garakani *et al*., 2020). SSRIs differ from benzodiazepines in that they take a long time to exhibit clinical benefits, while benzodiazepines have a fast anxiolytic action (Strawn *et al*., 2018). Therefore, this feature of SSRIs is a great disadvantage when a person requires immediate relief of acute anxiety. The side effects associated with SSRIs can be as follows: nausea, headache, insomnia or other types of sleep disturbance, nervousness, dry mouth, sexual problems, and weight gain/loss; also, during the first part of treatment, some individuals can experience activation or otherwise worsening of their anxiety (Baldwin *et al*., 2014; Garakani *et al*., 2020).

Serotonin–Norepinephrine Reuptake Inhibitors-SNRIs such as venlafaxine and duloxetine work to help the neurotransmitter systems of serotonin and norepinephrine by preventing the reabsorption of these neurotransmitters which ultimately increases their levels (Strawn *et al*., 2018; Garakani *et al*., 2020). These medications are usually employed for the long-term treatment of anxiety disorders and are ideal for the patients suffering from anxiety and depression (Bandelow *et al*., 2017; Garakani *et al*., 2020). Unlike the fast acting benzodiazepines, SNRIs take time and persistent use before their medical results are felt. Side effects include nausea, dizziness, sweating, sleeplessness, headaches, and sexual problems; venlafaxine is one of the drugs likely to contribute to hypertension (Baldwin *et al*., 2014; Strawn *et al*., 2018, Sah, 2025). Therefore, treatment must take into account the patient's tolerance level.

Azapirones-Buspirone is the primary drug in the azapirone group used for anxiety treatment, making it an alternative to benzodiazepines in managing anxiety. This drug acts as an anxiolytic mainly through affecting serotonin system by acting on 5-HT1A receptors (Bandelow *et al*., 2017; Garakani *et al*., 2020). It is used to treat generalized anxiety disorder (GAD) and takes longer to relieve anxiety symptoms in comparison with fast-acting benzodiazepines (Strawn *et al*., 2018; Garakani *et al*., 2020). One of the advantages of buspirone is its low potential of sedation and impairment of psychomotor functioning compared to benzodiazepines, which makes it safe. Nevertheless, during the treatment with this medication, some side effects such as dizziness, headache, nausea, and anxiety may occur (Garakani *et al*., 2020, Singh, 2025).

Beta-Adrenergic Blockers-Beta-adrenergic blockers such as atenolol and propranolol are different than regular anxiolytics because their major mode of action lies in controlling autonomic features of anxiety instead of altering psychological state directly. These drugs act by blocking beta receptors and lowering sympathetic tone levels and thus lead to an improvement of symptoms like tachycardia, palpitations, sweating, and tremor, and accordingly, they are very suitable for people with situational anxiety (Bandelow *et al*., 2017; Garakani *et al*., 2020). Thus, beta-blockers do not treat cognitive symptoms of anxiety (like fear), and this leads to a limited role of these drugs in the treatment of generalized anxiety disorders (Garakani *et al*., 2020). The most important risks that arise during the administering of beta-adrenergic blockers are the hypotension, bradycardia, weariness, and coldness of the upper and lower limbs, thus it is necessary to take into consideration the state of the cardiovascular system (Bandelow *et al*., 2017; Steenen *et al*., 2016).

Mechanisms of Anxiolytic Action-The pharmacological variety of anxiety medications is evident in their methods of action. The medications interfere with neurotransmitter systems linked to neuronal excitement, emotional state, the feeling of danger, and stress responses.

GABAergic Modulation-The anxiolytic action of benzodiazepines is mediated mainly through modulation of γ-aminobutyric acid (GABA)ergic transmission used in the central nervous system (CNS). GABA is a neurotransmitter responsible for inhibition in the CNS and plays an important role in the control of excitability of neurons. Benzodiazepines act by binding to allosteric sites on GABA receptors and exert an effect that amplifies the action of the endogenous GABA (Rudolph & Knoflach, 2011; Sigel & Ernst, 2018). When GABA is present in the body, benzodiazepines activate chloride ion channels and thus cause the influx of chloride ions and hyperpolarization of the neurons. The resultant decrease in the excitability of neurons brings about anxiolytic, sedative, muscle-relaxant, and anticonvulsant effects (Griffin *et al*., 2013; Sigel & Ernst, 2018). It is because of this characteristic of benzodiazepines that a curious pharmacological effect is seen: the same enhancement of inhibition of neurotransmission leads to anxiolytic effects, but also brings about unwanted sedative effects, motor coordination disorders, decreased alertness, and psychomotor or cognitive impairments (Griffin *et al*., 2013; Baldwin *et al*., 2013). Therefore, behavioral modifications observed after benzodiazepine administration must be interpreted cautiously as decreases in activity and the signs of anxiety disorder can account for true anxiolytic effects or for nonspecific sedative effects (Rudolph & Knoflach, 2011).

Serotonergic Modulation-SSRIs work predominantly by blocking SERT, which in turn leads to the decrease of serotonin (5-hydroxytryptamine; 5-HT) reuptake into presynaptic neurons. Consequently, this effect raises the levels of serotonin in the synaptic cleft and, upon prolonged usage, produces adaptive transformations in serotonergic neurotransmission, which are connected to the therapeutic effect of SSRIs in the case of anxiety disorders (Stahl, 1998; Strawn *et al*., 2018). Although the process of serotonin reuptake inhibition takes place relatively quickly, the development of the clinical anxiolytic effect is normally much slower, which means that the extended neuroadaptive processes are essential for achieving a therapeutic effect (Bandelow *et al*., 2017; Garakani *et al*., 2020). Buspirone, on the other hand, works in a different serotonergic way and functions basically as a partial agonist of 5-HT1A receptors. Its anxiolytic effects develop gradually, which is particularly relevant in the case of generalized anxiety disorder (Garakani *et al*., 2020). An important advantage of buspirone is that it usually induces less sedation and psychomotor disturbance and is less prone to produce a tolerance and physical dependence, thus presenting itself as a good non-benzodiazepine option for managing anxiety (Bandelow *et al*., 2017; Garakani *et al*., 2020, Chahar, 2025).

Serotonergic and Noradrenergic Modulation-SNRIs are drugs that work by blocking the serotonin and norepinephrine transporting proteins, making these levels high in synaptic clefts (Stahl *et al*., 2005; Strawn *et al*., 2018). The mechanism helps in harnessing serotonergic and noradrenergic inputs into the neuronal pathways responsible for regulating mood, processing emotions, as well as overcoming stress. Hence, medications like venlafaxine and duloxetine may be prescribed for some anxiety disorders and are especially effective in co-occurring cases of anxiety and depression (Bandelow *et al*., 2017; Garakani *et al*., 2020). As a rule, SSRIs work

over a period and thus are more suitable for long-term treatment than for immediate resolution of anxious states (Strawn *et al*., 2018).

Adrenergic Blockade-Beta-adrenergic blockers alleviate selected peripherally observed signs of anxiety mainly through acting as antagonists to β-adrenergic receptors and thereby mitigating the physiological effects of sympathetic system activation (Steenen *et al*., 2016, Yadav & Kamal, 2025). Reduced adrenergic activity may lead to lesser symptoms such as palpitations, tachycardia, and tremors, allowing for the use of medicines like propranolol in situations where autonomic symptoms are especially common (Steenen *et al*., 2016; Garakani *et al*., 2020). Yet, beta blockers, in fact, reduce peripheral autonomic responses rather than dealing with all the cognitive and emotional manifestations of anxiety, including the persistent worry or expectation of fear (Garakani *et al*., 2020). In general, the anxiety treatment with medicines possesses several neuropharmacological mechanisms that complement each other and include the increase of GABAergic inhibition by benzodiazepines, modulation of serotonergic neurotransmission by SSRIs and buspirone, simultaneous serotonergic and noradrenergic modulation with the help of SNRIs and reduction of peripheral adrenergic activity via beta blockers (Bandelow *et al*., 2017; Strawn *et al*., 2018; Garakani *et al*., 2020).

Therapeutic Applications-Various types of anxiety disorders and related clinical settings utilize anti-anxiety medications. Selection of pharmacotherapy is influenced by the disorder type and severity, time taken to achieve therapeutic goals, treatment duration, symptomatology, presence of comorbid diseases, and potential side effects (Bandelow *et al*., 2017; Garakani *et al*., 2020). In GAD, SSRIs and SNRIs are first-line drugs for long-term management, while buspirone is another medication that belongs to the group of non-benzodiazepines. Short-term relief of symptoms is usually achieved using benzodiazepines, but they are known to possess sedative properties and cause a number of undesirable effects (Strawn *et al*., 2018; Garakani *et al*., 2020, Bandelow *et al*., 2017; Garakani *et al*., 2020). In the treatment of social anxiety disorder, the medications indicated are SSRIs like sertraline and paroxetine, and the SNRI venlafaxine. However, beta-adrenergic blockers such as propranolol have shown efficacy in controlling peripheral autonomic signs like palpitations and tremors, especially in some performance-related circumstances (Bandelow *et al*., 2017; Steenen *et al*., 2016). The pharmacological treatment can be combined with psychological interventions. In particular, cognitive-behavioral therapy (CBT) is one of the psychological interventions that may be included in an individualized treatment approach (Bandelow *et al*., 2017). In addition, pharmacological treatment has been described in the paper in relation to phobias, insomnia related to anxiety, and acute stress situations, as well as preoperative anxiety and performance anxiety. The entire range of indicated uses shows that the term of anti-anxiety treatment relates to more than a single drug or method; it implies that various pharmacological classes are to be used depending on the nature of clinical goals, symptoms, and needs of the patient (Baldwin *et al*., 2014). As a whole, the therapeutic properties of the drug classes show how their interaction can be used in practice. Benzodiazepines can act as a quick relief measure, while SSRIs and SNRIs are indicated for long-term treatment; moreover, buspirone as a non-benzodiazepine medication may be particularly applicable for general anxiety disorder (GAD), and beta blockers can help in dealing with certain physical symptoms of anxiety (Strawn *et al*., 2018; Garakani *et al*., 2020). However, it is necessary to stress that pharmacotherapy may not be applied in isolation. Its combination with psychotherapy may improve the treatment results and lead to more effective management of anxiety disorders (Bandelow *et al*., 2017).

Adverse Effects and Safety Concerns-The effectiveness of anxiolytic agents is significantly determined by their side effects, which depend on a number of variables such as drug class, dosage, duration of treatment, concomitant medications, and individuals predisposition to certain side effects (Baldwin *et al*., 2014; Garakani *et al*., 2020, Chahar, 2025). Nontheless, tolerance and safety evaluation is important for good pharmacological therapy choice for the patients with anxiety disorders.

Benzodiazepines may cause such common adverse effects like drowsiness, sedation, dizziness, tiredness, poor concentration ability, memory impairment, and poor psychomotor coordination (Baldwin *et al*., 2013; Griffin *et al*., 2013). Under prolonged or wrongful inpatient usage benzoids may lead to tolerance, patients may develop physical dependence and withdrawal symptoms upon after effect withdrawal (Soyka, 2017; Garakani *et al*., 2020, Sharma, 2025). Besides, respiratory depression might be an issue if the drug is overdosed or taken simultaneously with substances of other origin (Griffin *et al*., 2013). The SSRIs have different side effects than anxiolytic drugs, such as nausea, vomiting, headache, sleep disturbance, anxiety, dry mouth, sexual dysfunction, and changes in body weight (Baldwin *et al*., 2014; Strawn *et al*., 2018). Short-term patients may feel symptoms of activation, anxiety, or restlessness in the first days of treatment session (Garakani *et al*., 2020). There might be other negative effects starting from nausea, dizziness, sweating, insomnia, headaches. Some patients may also be experiencing high blood pressure levels (Baldwin *et al*., 2014; Strawn *et al*., 2018). Bad news is that buspirone gives fewer sedation chances that the benzodiazepines but still possible risky side effects such as dizziness, headache, nausea, and anxiety (Bandelow *et al*., 2017; Garakani *et al*., 2020). The products of the beta-adrenergic drugs create side effects in the form of cardiovascular issues, hypotension, bradycardia, tiredness, dizziness, and cold limbs (Steenen *et al*., 2016). Those side effects are more important than this comfort for the patients. Sedation and impaired hand-eye coordination may prevent driving and operating vehicles, while the issues with memory and attention are complicated by learning and working (Baldwin *et al*., 2013; Griffin *et al*., 2013).

Dependence, Tolerance and Withdrawal- Dependence is a major limitation of some of the anxiolytic treatments like benzodiazepines. Continuous or prolonged exposure to these medicines may lead to physiological changes which result in tolerance and dependence (Baldwin *et al*., 2013; Soyka, 2017). Tolerance means decreased sensitivity to the drug's effects after administration of the medicine repeatedly, whereas physical dependence implies physiological adjustments due to which withdrawal symptoms can occur if an individual stops using the drug (Soyka, 2017). Withdrawal from benzodiazepines can include symptoms like rebound anxiety, insomnia, irritability, tremors, restlessness and other neuropsychiatric or autonomic effects. The type and seriousness of withdrawal symptoms depend on the dosage, treatment duration and pharmacokinetics of the drug (Baldwin *et al*., 2013; Soyka, 2017). Repeated administration of benzodiazepine may make it difficult to understand pharmacological and behavioural effects because there may be different responses after acute administration and chronic therapy when tolerance develops to some of the central nervous system effects (Griffin *et al*., 2013). Thus, it is important to prescribe medications wisely and supervise patients closely. Benzodiazepines should be applied at the lowest efficient dosage during an optimal period and treated carefully once physical dependence has emerged (Baldwin *et al*., 2013; Bandelow *et al*., 2017). In addition, it is essential to address broader anxiety treatment, such as psychotherapy, including cognitive behavioural therapy and lifestyle modifications separately or in combination with medication depending on the individual patient's needs (Bandelow *et al*., 2017; Garakani *et al*., 2020).

Interpretation of Anxiolytic Effects: Beyond Anxiety Reduction- When evaluating anxiolytic drugs, one important point to keep in mind is that the behavioral response seen may not be solely attributed to decreased anxiety. Anti-anxiety agents, and especially benzodiazepines, may also have direct effects on sedation, locomotor activity, cognition, and psychomotor performance, as well as attempts to reduce anxiety (Griffin *et al*., 2013; Rudolph & Knoflach, 2011). For example, reduced locomotor activity following therapy may stem from either true antianxiety effects, or pure sedation or motor impairment, etc. Similarly, while a subject may have less anxiety, he/she may perform worse on a cognitive test, as benzodiazepines can also affect cognitive performance, attention, memory, and psychomotor functions (Baldwin *et al*., 2013; Griffin *et al*., 2013). The source project also underlines the fact that the effects of sedation and motor performance as well as cognitive effects may act as some extra confounding factors when interpreting the anxiolytic responses.

Another important implication of this fact for pharmacological experiments is that the need for appropriate control groups, randomization and blinding is required in order to avoid potential bias and increase reliability of the interpretation. Using many measures of the outcomes of the therapy may give a better insight than relying on

one particular behavioral outcome, as all anxiety outcomes may be analyzed at the same time with locomotion or cognitive performance. The amount of the active substance used and the time of using the drug play an important role as well, as what can be effective in producing anxiolytic effects may be at the same time responsible for higher levels of sedation and adverse effects (Griffin *et al*., 2013).

Limitations of Current Anti-Anxiety Pharmacotherapy- There are a number of significant drawbacks of the current pharmacotherapy for anxiety disorders. Benzodiazepines, though capable of providing quick and effective control of this condition, have limited applicability in long-term treatment due to negative effects such as sedation and psychomotor issues as well as the danger of tolerance, dependence, and withdrawal resulting from prolonged usage (Baldwin *et al*., 2013; Soyka, 2017). As for SSRIs and SNRIs, these medications largely avoid the drawbacks associated with benzodiazepines; however, they also require substantial time to demonstrate their therapeutic effect, while their side effects can cause problems with tolerability and compliance (Baldwin *et al*., 2014; Strawn *et al*., 2018; Garakani *et al*., 2020). Another limitation is that pharmacological treatment mainly targets symptoms and neurological functions related to anxiety but does not eliminate psychological and behavioral aspects contributing to the condition. Therefore, psychotherapy, especially cognitive behavioral therapy, and lifestyle measures can provide additional benefits and can be effective as part of the treatment approach (Bandelow *et al*., 2017; Garakani *et al*., 2020). Drug interaction is a substantial point to be taken into consideration. The effect of benzodiazepines is often enhanced in terms of sedative medications, which can cause additional harm (Griffin *et al*., 2013). Another constraint is connected with the fact that the same pharmacological treatment can't be equally effective for all patients. The severity of symptoms and other factors such as comorbid disorders, response to treatment, susceptibility to adverse effects, concomitant medications, etc. can affect the efficiency of the particular anxiolytic (Baldwin *et al*., 2014; Bandelow *et al*., 2017). Hence, the pharmacological treatment of anxiety disorders should be based on individual assessment and selection and adjustment of treatment as needed (Garakani *et al*., 2020, Kumar, 2025).

Emerging and Future Perspectives- The objective of a new generation of anxiolytics is to provide the same therapeutic capabilities while removing disadvantages of medications already present in the market such as sedation, cognitive impairment, addiction as well as other side effects. One innovative way to achieve this is to create substances that target specific receptor subtypes and neural circuits that take part in anxiety regulation. The project at hand suggests that the selective effect should be achieved through the specific targeting of subtypes of GABA receptors and subtypes of serotonin receptors. Investigations into the nature of effects of substances that selectively affect GABA receptor subtypes make researchers believe that a higher selectivity of receptor interaction could allow separating the anxiolytic effect from some sedative and addiction-related side effects characteristic of ordinary benzodiazepines. Attempts to find better-targeted approaches in terms of neurotransmitter systems including serotonin systems, GABA systems, and glutamate systems are also ongoing within the project. The three neurotransmitter systems targeted within the project are serotonin, GABA, and glutamate. Another goal is to create new non-addictive alternatives to classic benzodiazepines, especially important for patients who may need to take medication for a long time. The project considers extracts from plants with anxiolytic effect to be potential candidates whose efficiency must be verified with the help of pharmacological and clinical studies. Also, there are prospects for the use of novel delivery techniques. It may be possible to make drug-delivery systems based on nanotechnology which would target the brain better and increase the bioavailability of drugs. Genetic profiling is another potentially useful approach the importance of which is founded in personalized medicine and pharmacogenomics. The application of genetic techniques may also enable determination of the right drugs for patients taking medication. In summary, future prospects for the development of anxiolytics can lead to the transition from a broader CNS modulation toward a more selective approach that will promote more efficient and personalized anxiolytics in the future (Rudolph & Knoflach, 2011; Garakani *et al*., 2020).

Conclusion

Drugs that counter anxiety continue to occupy an important place in the field of pharmaceuticals that tackle issues of anxiety and similar conditions due to their capacity to act on GABAergic, serotonergic, noradrenergic, and adrenergic connections. While benzodiazepines are being fast-acting medications for acute anxiety states, SSRIs and SNRIs are considered more relevant medications in a long-term approach. Additionally, buspirone may be considered a non-benzodiazepine serotonergic medication, and the use of beta-blockers may help relieve certain physical symptoms connected with anxiety. However, anxiety-controlling drugs may also be troublesome in terms of such side effects as sedation, dizziness, cognitive and psychomotor impairment, tolerance, dependence, withdrawal effects in the course of medication use, especially in cases of prolonged use of benzodiazepines. Hence, it should be stated that reduced anxiety-related behavior should be treated with caution as not only anxiolysis may take place but also sedation and changes in locomotor and cognitive processes as well. Therefore, effective drug selection, dosage, and deadlines of treatment, as well as a qualified medical supervision should be taken into account in order to take the most out of the use of drugs for anxiety. Pharmacotherapy is more efficient when combining it with appropriate psychotherapy and lifestyle changes. With regard to the future development of the drugs countering anxiety, it is expected that pharmaceutical industry will focus on the creation of new selective drugs that will not cause any risk of addiction.

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