Anxiety in childhood and adolescence

M. Pérez Pascual*, P. Sánchez Mascaraque**

*Pediatrician. Adolescent Medicine Unit. La Paz University Hospital. Madrid.
**Child and Adolescent Psychiatrist. Jaime Vera Mental Health Center. Coslada. Henares University Hospital. Madrid

Abstract

One of the most prevalent mental disorders in childhood and adolescence are anxiety disorders. On many occasions they do not appear alone, but are associated with comorbidities such as depression, academic difficulties and substance abuse, among others. The clinical manifestations of anxiety in these stages of life can be a complicated task for the pediatrician to tackle. Age is a determining factor in clinical expression, with fear, sadness, irritability and somatic complaints being target symptoms that should make us suspect its existence.
Anxiety disorders in children include: separation anxiety disorder, selective mutism, specific phobia, agoraphobia, panic disorder, social anxiety disorder, and generalized anxiety disorder. The Primary Care pediatrician is key to detecting these symptoms at an early stage and initiating their adequate management and treatment.
This article will review the etiology, epidemiology, clinical manifestations, diagnosis, prevention, and treatment of anxiety disorders.

Resumen

Uno de los trastornos mentales más prevalente en la infancia y la adolescencia son los trastornos de ansiedad. En muchas ocasiones no se presentan solos, sino que se asocian a comorbilidades como depresión, dificultades académicas y abuso de sustancias, entre otras. Las manifestaciones clínicas de la ansiedad en estas etapas de la vida puede ser una tarea complicada para el pediatra. La edad es un factor determinante en la expresión clínica, siendo el miedo, la tristeza, la irritabilidad y las quejas somáticas, síntomas diana que nos deben de hacer sospechar su existencia.
Los trastornos de ansiedad en los niños incluyen: trastorno de ansiedad por separación, mutismo selectivo, fobia específica, agorafobia, trastorno de pánico, trastorno de ansiedad social y trastorno de ansiedad generalizada. El pediatra de Atención Primaria es clave para detectar tempranamente estos síntomas e iniciar su abordaje y correcto tratamiento.
En este capítulo se va a revisar la etiología, epidemiología, clínica, diagnóstico, prevención y tratamiento de los trastornos de ansiedad.

Key words: *Anxiety disorders; Childhood; Adolescence; Somatic symptoms; Fear.*

Palabras clave: Trastornos de ansiedad; Infancia; Adolescencia; Síntomas somáticos; Miedo.

OBJECTIVES:

- To learn that the etiology of anxiety disorders is multifactorial, with biological, psychological and socio-environmental factors being involved.
- To understand that anxiety in childhood is equivalent to fear. Fears vary according to the age of the child or adolescent.
- To comprehend that the diagnosis is clinical. Questionnaires exist that can support the diagnosis.
- To realize the importance of selecting the appropriate treatment which should be based on: the severity of the symptoms, the presence of comorbidity, the age of the child and the nature of the causal factors.
- To ascertain that the first intervention consists in psychoeducation of the child and their parents about anxiety.

Introduction

Anxiety, in situations of stress or danger, can be normal and adaptive, even necessary, since it makes the person protect himself of a potentially harmful agent. If the reaction is excessive, it is considered pathological anxiety.

Anxiety disorders, globally, are the most frequent psychiatric disorders in childhood and adolescence, with prevalence rates ranging between 10 and 20%, above depression and behavioral disorders[1]. Anxiety disorders often commence in these stages and present a progressive, persistent, and chronic or recurrent course. Early diagnosis and treatment can reduce the impact on the life of the child and adolescent, in all his/her spheres, academic, social and family, and prevent the persistence of an anxiety disorder in adult life[2-4]. Anxiety can be equivalent to fear. Fears and worries are normal in childhood, they have an evolutionary character, they prepare the child to face situations that may involve danger, as well as to face changes. These fears vary with age. At an early age,

they are frightened by being alone or by loud noises. As they grow up, the fear of being separated from their parents, of the dark, and of strangers appears. At school age, fears of natural phenomena, monsters or diseases manifest, and in adolescence the fear of being laughed at and ridiculed in front of peers, academic failure, school competition and health issues predominates. Anxiety presents when there is an immediate real or imagined danger. It is adaptive in nature and is necessary for survival. It becomes pathological when it is excessive in intensity, duration (in general, if it lasts beyond 6 months), or causes disproportionate discomfort or suffering. It is also considered pathological when the trigger is an objectively neutral or harmless stimulus.

Anxiety can be triggered by external or internal factors (memories, images, ideas, wishes). It manifests itself with autonomic symptoms (psychomotor restlessness, tachycardia, piloerection, sweating...), cognitive (fear, worry) and behavioral symptoms, with inhibition being the most typical response in anxiety disorders. Adolescence, specifically, is a stage of evolutionary changes and challenges, physical changes, academic choices, university entrance exams as particularly stressful events, beginning of the working life, the need for acceptance and integration in the peer group, onset of affective couple relationships, etc.[1]. Sometimes, these important life changes precipitate anxiety in vulnerable adolescents, possibly triggering pathology. Following the classification of the diagnostic and statistical manual of mental disorders in its fifth edition (DSM-5)[5], the most common anxiety disorders in childhood are: separation anxiety disorder (SAD), generalized anxiety disorder (GAD), social phobia and specific phobias. Comorbidity is common in anxiety disorders, especially with another anxiety disorder and with depression. It is relevant the fact that in Pediatrics, somatoform disorders, abdominal pain, headaches and chronic pain without identifiable physical pathology, are associated with a comorbid anxiety disorder in up to 20%. Its diagnosis can avoid unnecessary complementary tests and iatrogenic treatments. This review will address: epidemiology, etiopathogenesis, clinical manifestations, pharmacological and psychotherapeutic treatment, prognosis and prevention of anxiety disorders.

Epidemiology

The prevalence of anxiety disorders in the pediatric age ranges between 10% and 20%, depending on the epidemiological design of the study, the diagnostic criteria used, the anxiety disorders included, and the age of the patients.

Anxiety disorders in childhood and adolescence are associated with academic and social difficulties, depression, suicide attempt, and substance abuse in adulthood. On the other hand, the co-occurrence of several anxiety disorders in the same patient is frequent. 33% of children and adolescents with anxiety disorders meet criteria for two or more anxiety disorders. Furthermore, comorbidity is found with other psychiatric disorders, mainly depression, with ranges that vary between 28 and 68%.

In addition, in the coming years we will have to answer the following question: what has been the impact of the COVID-19 pandemic on the prevalence of anxiety in childhood? Pandemics are rare but potentially devastating crises that affect the physical, social and psychological lives of many children and their families. Although they share much in common with other natural disasters: impact on the community, unpredictability, victims and persistent effects, the response to pandemics differs from that of other disasters in the need for measures to prevent their spread, among which social distancing and quarantine stands out[6,7].

Most of the studies carried out in relation to anxiety disorders secondary to the COVID pandemic have been performed in China. They show high rates of anxiety during confinement, which reached 37.4%, and remained in the stabilization phase[8].

There are also studies of the emotional impact secondary to COVID-19 in the Spanish child population, which included 1,143 parents of Spanish and Italian children between 3 and 18 years of age. It was found that a high percentage (85.7%) of parents indicated changes in the emotional state of their children during the quarantine. This study has the limitation that the children were not directly asked, but rather the survey was referred by the parents[9].

Based on what has happened in other pandemics, it is foreseeable that during these years of stabilization of the SARS-Cov2 pandemic, an upturn in anxiety disorders, especially in susceptible children and adolescents will be present.

Etiopathogenesis

The etiology of anxiety disorders is multifactorial, with biological, psychological and socio-environmental factors being involved in their development.

The various factors involved in the etiology of anxiety disorders can be included in the following categories.

Development factors

The progression of anxiety throughout life should be assessed, a developmental perspective helps to understand the pathogenesis of anxiety disorders. Babies who show apprehensive, hesitant or distressed reactions to novelty are more likely to avoid new stimuli when they start to walk[10]. These young children have been described as "behaviorally inhibited", having a higher risk of developing anxiety disorders in childhood[11,12], social anxiety disorder in adolescence and, finally, more likely to have persistent anxiety disorders in adulthood.

Cognitive and learning factors

People with anxiety disorders have an attention bias towards threat-related stimuli, are hypervigilant towards them, and even interpret neutral stimuli as potentially harmful.

Another possible cognitive determinant is negativity related to error, where a low tolerance towards error throughout development (from 6 to 18 years) can predict anxiety in different periods of life[13].

Neurobiological factors

The brain regions currently known to be involved in the feeling of anxiety are the prefrontal cortex, which inte-

grates external information, and the amygdala, which is responsible for the initial fear response.

In addition to them, posterior structures, the anterior cingulate cortex, the insula, and the cerebellum have been implicated in anxiety disorders in functional studies in children and adolescents. Regarding neurotransmitters, in anxiety there is an increase in the release of norepinephrine, which raises glutamate and decreases GABA. Instead, serotonin produces the opposite effect. Hence, the therapeutic action of selective serotonin reuptake inhibitors (SSRIs) in anxiety disorders. Serotonergic neurons also exert an inhibitory action on noradrenergic neurons, which play an essential role in triggering anxiety and in its maintenance[2].

Genetic factors

Most estimates of the heritability of trait anxiety in children are around 30%, although some studies range from 50 to 60%. These findings suggest that genetic factors play an important role in the development of these disorders in relation to environmental factors[14].

Environmental and social factors[3,15]

Environmental and social factors are very important in developing and maintaining an anxiety disorder. Over a genetic basis and a susceptible temperament, the context in which the child or adolescent is found is decisive when it comes to becoming ill. It is estimated that the environment contributes 60% to anxiety disorders.

- Within parental upbringing styles, excessive overprotection, excessively punitive educational styles and the transmission of specific fears by parents can contribute to the genesis of these disorders.
- Stressful life events (family, school or social conflict, traumatic situations, bereavement or grief of a loved one, switching school or address) can act as triggering or maintaining factors.
- Dysfunctional families with unfavorable health conditions (neurotic disorders, uncompensated chronic illnesses), high levels of violence and little ability to solve problems.
- Unfavorable social situations (low socioeconomic level, economic adversity, unfavorable living conditions) can generate a feeling of chronic insecurity that contributes to the genesis of an anxiety disorder.

Clinical manifestations

The clinical manifestations of anxiety disorders are marked by the age and cognitive development of each child and adolescent, as well as the type of fears or concerns.

Identifying the core fear or motivation behind particular symptoms or behaviors is critical to an accurate diagnosis:

- Separation Anxiety Disorder: Being away from parents or caregivers.
- Social Anxiety Disorder: Being ashamed of oneself in front of peers.
- Generalized Anxiety Disorder: Having a constant feeling of fear or worry.
- Panic disorder with agoraphobia: fear of having a panic attack and not being able to escape.

For example, a child may be anxious about attending school for various reasons. Assessment of the specific concern is critical to making the diagnosis and planning treatment.

Within the clinic manifestations, the following can be highlighted[1]:

- In babies: crying, irritability, muscle hypertonia, vomiting, hyperventilation, sobbing spasms.
- At school age: fears, somatic symptoms (abdominal pain, headaches), irritability, behavioral changes (restlessness, disobedience, tantrums), memory, attention and concentration problems, sleep-related problems (insomnia, nightmares), rituals.
- In adolescence: irritability, dizziness, chest pain, insomnia, fatigue and social fears. It is the stage of development in which the symptoms of depersonalization and derealization present. Depersonalization is a feeling of strangeness towards one's own self, as if the adolescent felt empty. In derealization, the surrounding world is perceived as if it did not exist, as if it is not real or alive.

Table I shows the diagnostic criteria for anxiety disorders according to DSM-5[5].

Comorbidity

In anxiety disorders, comorbidity is very frequent, although it usually goes unnoticed and is underdiagnosed.

When an anxiety disorder is diagnosed, comorbidities must be explored. The existence of these aggravates the symptoms, increases academic and work deterioration, and determines a poor response to treatment, which is why both prevention and early diagnosis are important, sometimes difficult due to overlapping symptoms. Comorbid disorders benefit from concomitant specific treatment. They can occur transversally, if several disorders occur in a short period of time, or longitudinally, when these disorders develop over a longer period of time. The most frequent comorbidities are:

- With another anxiety disorder, 50%.
- Depression, 33%. Major depression is associated with severe anxiety disorders, where anxiety symptoms usually precede the onset of depressive symptoms.
- Somatic symptom disorder.
- Attention deficit hyperactivity disorder (ADHD), 20-40%.
- Substance use disorder. Treatment of anxiety has been shown to be accompanied by a decrease in substance use, and the problems derived from it in the long term.
- Sleep disorder, up to 90%.

Diagnosis

The experience of the professional when it comes to recognizing the symptoms of anxiety in childhood and adolescence is decisive in being able to detect anxiety disorders in time, since the diagnosis is clinical.

The diagnosis of anxiety disorders is clinical and is carried out following the diagnostic criteria of the international classifications: ICD-11 and DSM-5.

There are some questionnaires and scales to support the diagnosis in detecting anxiety in children. Among them are: the SCAS (Spence Children´s Anxiety Scale) for preschool and childhood anxiety; and the CMAS-R2 (Revised Children´s Manifest Anxiety

Table I. Diagnostic criteria for anxiety disorders according to DSM-5[2,5]

Disorder	*Core clinical features*	*Other criteria for diagnosis**
Separation anxiety disorder	Intense and persistent fear or anxiety related to the fact of having to be apart from a person with whom there is a close bond. This is evidenced in a minimum of three clinical manifestations based on worry, subjective psychological discomfort, rejection of staying home alone or going to other places (school, work, etc.) and/or the presence of nightmares or physical symptoms in the face of the separation from these relationship figures or anticipation of the event	The fear, anxiety, or avoidance is persistent; lasting at least, 4 weeks in children and adolescents
Generalized anxiety disorder	Excessive, persistent, and difficult to control anxiety and worry about various events or activities and associated with three or more symptoms of physiological overarousal	Anxiety or worry must be present on most days for a minimum of 6 months
Social anxiety disorder (social phobia)	Intense fear or anxiety that almost always manifests in relation to one or more social situations in which the person is exposed to possible scrutiny by others. The person fears acting in a certain way or showing symptoms of anxiety, which may be negatively valued by observers	Specification: performance-related only (if the phobic fear is restricted to speaking or performing in public). Fear, anxiety, or avoidance must be present for a minimum of 6 months
Specific phobia	Intense and persistent fear or anxiety, practically immediate and invariable with respect to a specific object or situation, which is avoided or endured at the cost of intense fear or anxiety	Specifications depending on the type of phobic stimulus: animal, natural environment, blood-wound, injections, situations... Fear, anxiety or avoidance must be present for a minimum of 6 months
Selective mutism	Persistent inability to speak or respond to others in a specific social situation in which one is expected to do so, despite doing so without problems in other situations (typically at home and in the presence of family members)	Minimum duration of 1 month (not applicable to the first month of attending school)
Panic disorder	Presence of unexpected and recurrent panic attacks, at least one of them followed by a minimum of 1 month of persistent restlessness or worry about the appearance of new crises or their consequences, and/or by a significant and maladaptive change in behavior related to panic attack	
Agoraphobia	Intense fear or anxiety that almost always appears in two or more typically agoraphobic situations (public transportation, in open places, in closed places, when queuing or being in the middle of a crowd and/or when being alone outside the home). Furthermore, they are actively avoided, they require the presence of a companion, or are endured at the cost of intense fear or anxiety. The person dreads or avoids such situations for fear of having difficulty fleeing or receiving help in the event of distress-like symptoms, or other disabling or embarrassing symptoms	Fear, anxiety, or avoidance must be present for a minimum of 6 months

**This column omits the criteria that imply: a) it is not better explained by another psychopathological disorder or other medical conditions-substance intake; and b) they cause significant psychological distress and/or impairment in social, work/school, or other areas.*

Scale) for children and adolescents aged 6 to 19 years.

Another of the questionnaires is STAIC (State-Trait Anxiety Inventory for Children) or state-trait anxiety questionnaire for children, which assesses current anxiety and the subject's predisposition to anxiety, respectively[16,17]. The CBCL (Child Behavior Checklist) questionnaire, which discriminates internalizing symptoms, is also useful.

Table II shows an example of diagnostic assessment of anxiety disorders in childhood and adolescence[3,15].

Differential diagnosis

The differential diagnosis of anxiety disorders in childhood is complex, due to the high overlap rates of various anxiety disorders in the same patient and their comorbidity with other psychological-psychiatric processes.

In general, it is necessary to make a differential diagnosis with[16,2,3]:

- Somatic symptoms and related disorders.
- Obsessive compulsive disorder (OCD).
- Post-traumatic stress disorder.
- Attention deficit hyperactivity disorder (ADHD).
- Behavior disorder.
- Schizophrenia.

Table II. Diagnostic assessment of anxiety disorders in childhood and adolescence: data that should be collected in the medical history[3,15]

Medical history

Onset and development of symptoms:
- Stressful events or "Life Events"
- Comorbidity with other psychopathology
- Impact produced by the symptoms (family, school, social)

Personal Development history:
- Temperament
- Abilities
- Bond quality
- Adaptability
- Childhood fears
- Response to strangers and separation

Medical record:
- Previous illnesses
- Previous medications
- Attendance to the emergency room

Academic history:
- Academic performance
- Sports performance

Social history:
- Family stressors
- Abuse or mistreatment
- Bullying
- Separation or loss
- Relationships with peers

Family history:
- Family dynamics
- Family psychopathological history
- Interview (information sources)
  - Patient
  - Family
  - School

- Organic pathology that can manifest symptoms similar to those of anxiety: hypothyroidism and hyperthyroidism, pheochromocytoma, cardiac arrhythmias (paroxysmal supraventricular tachycardia), Wilson's disease, epilepsy, hypoglycemia, vestibular disease, asthma, multiple sclerosis, Huntington's chorea, central nervous system tumors, etc.
- Consumption of toxics (alcohol, opiates, cocaine, caffeine, amphetamines, etc.) or medications responsible for the symptoms, such as: symptoms of withdrawal syndrome or side effects of psychostimulants, beta-agonists, steroids, theophylline, alpha-adrenergic stimulants, or calcium channel blockers.

Prevention

The pediatrician is in a privileged position for the prevention of these disorders, which is based on the identification of the risk factors already described in order to make an early diagnosis.

Recognizing exaggerated and inappropriate fears, exaggerated worries and avoidance behaviors given the child's age, should lead to suspicion of pathology and assess whether treatment is necessary. Risk factors include: personal or family history of anxiety, presence of stressful life events, female gender, having a chronic medical illness, and shyness and behavioral inhibition. Once diagnosed, its correct treatment will prevent its chronicity and negative impact on the child's life.

Treatment

The approach to anxiety disorders is multimodal. The choice of treatment should be based on: the severity of the symptoms, the presence of comorbidity, the age of the child and the nature of the causal factors.

The treatment of anxiety disorders requires a multimodal approach and a comprehensive therapeutic approach, with the aim of reducing symptoms, avoiding long-term complications, preventing the appearance of psychiatric comorbidity and the development of anxiety disorders in adulthood[1].

The first intervention is the psychoeducation of the child and parents about anxiety. Effective treatments are psychotherapy (cognitive-behavioral) and pharmacological treatment (selective serotonin reuptake inhibitors, SSRIs).

The goal of the treatment is to reduce the angst and stress of the child or adolescent. To design a treatment plan, the following aspects must be taken into account:
- The severity of the disorder.
- The specific anxiety disorder diagnosis
- Progression time of the disorder (if it is of recent onset, with long-standing symptoms with progressive or fluctuating worsening).
- Situations in which symptoms manifest (going to school, going to sleep, etc.).
- Comorbidities (ADHD, autism spectrum disorder, conduct disorder...).
- Age and degree of development of the child. The younger the child, the more focus should be placed in the intervention on parent training.
- Social, family and school situation of the child or adolescent.
- Family characteristics and psychopathology in the family.
- Resources available from the health system and family.
- Previous treatments that have been effective or that have failed.

The role of the Primary Care pediatrician is key. In the first place, because he is the professional who knows the environment of each child and from his position can carry out primary prevention to avoid anxiety, for example, detecting children with behavioral inhibition and teaching them strategies to expose themselves to novel situations; teaching coping techniques focused on the problem, such as: active search for information, positive self-instructions, distraction, relaxation, stopping negative thoughts, etc.

On the other hand, once the pediatrician detects an anxiety problem in a child or adolescent, he should train

Table III. Basic principles of behavioral management in children and adolescents with anxiety

- It must be understood that the child suffers from a real fear, it is not a whim or invented
- These symptoms are not his personality
- Investigate the cause of his fear and if there is a real reason for it
- Do not make him feel guilty
- Help him understand that his fear is irrational
- Allow progressive exposure to the particular fear

Table IV. Serotonin reuptake inhibitors (SSRIs) used in childhood and adolescence

	Initial dose (mg/day)	*Usual dose (mg/day)*	*Gradual increase*	*Maximum dose*
Fluoxetine	5-10	20	10-20 mg/day every 7-14 days	60-80 mg/day
Sertraline	12.5-25	50-100	25-50 mg/day every 7-14 days	200 mg/day
Citalopram	10	20-30	10 mg/day/week	40 mg/day
Escitalopram	5-10	10-20	10 mg/day/week	20 mg
Paroxetine	5	20	5 mg/day/week	60 mg
Fluvoxamine	10-25	50-100	50 mg/day/week	300 mg/day or 5 mg/kg/day

the minor's reference figures, as much as possible, on the basic principles of behavioral management in children with anxiety (Table III).

Adequate behavioral management can stop or delay the evolution of symptoms, slow down the progression and even reverse the disorder.

When symptoms cause problems, management alone is usually not enough, and treatment should be started. The treatment of choice is psychotherapy and, secondly, pharmacological treatment in children from 6 years of age, with moderate or severe symptoms if psychotherapy has failed. Cognitive behavioral therapy (CBT) is the method of psychotherapy with the most scientific evidence in randomized controlled trials for the treatment of anxiety disorders.

The objective of these interventions is to train the child to acquire coping skills, improve self-confidence, restructure erroneous cognitions and modify behaviors by practicing new ones (relaxation and breathing techniques, study techniques, social skill training, dramatization exercises or "role-play" and gradual exposure to situations that provoke anxiety)[3,18].

The pharmacological treatment of choice for anxiety disorders is SSRIs. Although they are not approved by the Food and Drug Administration (FDA) for the treatment of anxiety, numerous studies demonstrate their efficacy and tolerability[19,20]. The SSRIs whose efficacy has been shown to be superior to placebo are those shown in Table IV.

The recommended age is above 7 years-old for fluoxetine, 6 years for sertraline, 8 years for fluvoxamine and 12 years for escitalopram. For other drugs, there are not enough studies to recommend an age for treatment initiation. Some dual antidepressants, such as venlafaxine (37.5-150 mg/day), duloxetine (30-60 mg/day) and mirtazapine (15-30 mg/day), are also effective in treating anxiety, but only in adolescents and not contemplated in the technical data sheet.

Regarding the adverse events of SSRIs, the most frequent are: gastrointestinal symptoms, abnormalities in the sleep-wake cycle, restlessness, headache, akathisia, changes in food intake and sexual dysfunction. Venlafaxine may slightly increase blood pressure, and children may show worsening behavior with increased impulsiveness. With regards to the use of benzodiazepines, they have not shown greater efficacy than placebo in controlled clinical studies in children and adolescents with anxiety disorders, so they are not considered first-choice psychoactive drugs in these cases. However, they are frequently used in adolescents with severe anxiety symptoms and their indication should be limited to specific situations or at the start of treatment with SSRIs until they take effect. The most commonly used benzodiazepines are those with a long half-life (clorazepate, diazepam or lorazepam) due to their greater tolerance and lower risk of rebound effect and dependence, such as those included in Table V. In children and adolescents, it is advisable to avoid

Table V. Most used benzodiazepines in children and adolescents

	Presentations (mg)	*Starting dose*	*Recommended dose*	*Increase*	*Maximum dose*
Clorazepate (Tranxilium/ Dorken)	– 2.5 (powder), 5, 10, 15, 50	– 0.25 mg/kg/day – 2.5-5 mg/day	– 0.5 mg/kg/day – 10-30 mg/day – Every 8-12 hours	– 5 mg every 72 hours	– 1-2 mg/kg/ day (maximum 90 mg/day)
Clonazepam (Rivotril)	– Solution – Tablets 0.5 and 2 mg	– 0.01-0.03 mg/kg/day – 0.5 mg (maximum 1.5 mg) – Every 8-12 hours	–0.02-0.1 mg/kg/day – 2-4 mg/day	– 0.25-0.5 mg every 72 hours	– 6 mg/day
Diazepam (Valium)	– 5, 10 mg	– 2.5-5 mg/day – Every 6-8-12 hours	– 10-40 mg/day	– 5 mg	– 40 mg/day
Lorazepam (Orphidal/ Idalprem/Donix/ Placinoral)	– 1, 2, 5 mg	– 0.5-1 mg/day – Every 8-12 hours	– 0.02-0.1 mg/kg/day – 1-5 mg/day	– 0.25-0.5 mg	– 20 mg/day

benzodiazepines such as alprazolam or bromazepam. These drugs are contraindicated in adolescents with substance abuse.

Role of the Primary Care pediatrician

The Primary Care pediatrician is the first contact that the child or adolescent and their family have with the health system. This professional knows the child and his family from birth, being able to detect those temperaments that are susceptible to developing anxiety disorders. Identifying and diagnosing anxiety disorders in children is a complex task. On the one hand, anxious symptoms will manifest as somatic complaints that will guide the diagnosis towards organic pathology. On the other hand, the identification of concerns in children and adolescents is complicated, due to the difficulty in expressing their feelings, typical of their developmental maturity. It must not be forgotten that many of the anxiety disorders appear in association with other anxiety disorders or in comorbidity with other mental disorders. The Primary Care pediatrician must develop sufficient skills in the identification of symptoms related to anxiety and the diagnosis of the different anxiety disorders present in the pediatric age. If detected early, the appropriate guidelines must be provided, both to the child/adolescent and to their family, so as to start treatment promptly and thus, avoid masking and chronicity of these disorders.

Conflict of interest

There is no conflict of interest in the elaboration of this manuscript. Declaration of interests: none.

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Asterisks show the interest of the article in the opinion of the authors.

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Basic book on child and adolescent psychiatry for Primary Care pediatricians. In the chapter on anxiety, the approach to anxiety disorders in childhood and adolescence is presented in a practical way.

– Sanchez Mascaraque P. Ansiedad. In: Medicina de la Adolescencia. Atención Integral. Editors: Hidalgo Vicario MI, Rodríguez Molinero L, Muñoz Calvo MT. 3ª Ergon S.A.; 2021. Cap. 120, p.1013-9.

This chapter focuses on anxiety in adolescence. It is in this age group where many of the mental pathologies manifest their onset, which is why the detection and specific management of adolescents is so important for the pediatrician who treats this population up to 14-16 years of age.

– Rubio Morell B, Moreno Pardillo D, Lázaro García L. Manual de psiquiatría en la Infancia y la Adolescencia. (1ª edición). Elsevier. 2021. ISBN: 978-84-911384-7-1.

Book that brings together the theoretical bases of the discipline from a biopsychosocial and comprehensive model, and its content is based on the latest and most robust scientific evidence. This practical approach arises as a response to the imminent creation of the specialty of Child and Adolescent Psychiatry, with the aim of providing professionals access to training: practical, fast and evidence based.

Clinical case

Reason for consultation: abdominal pain and weight loss.

Current illness: A 13-year-old female adolescent is referred by her pediatrician because during the COVID pandemic lockdown she has been complaining of abdominal pain almost daily. For this reason, she has decreased her food intake, restricted fatty and high-calorie foods, and also eats smaller amounts. The reason she provides is that it hurts less that way.

On certain occasions she has vomited after a meal, but it has not been provoked. She has lost about 5 kg in two weeks and this has caused her great concern about her health. She finds herself looking very thin and with bad physical appearance.

She is 1.58 cm tall and weighs 42 kg. Her body mass index is 16.8. Menarche took place at age 11 years, and continues to have regular menstrual cycles.

Among her personal history, she highlights that she has suffered from abdominal pain since childhood and that it is exacerbated when she has exams and when she has to face new situations. She has always been constipated and it has worsened during confinement. She has always been skinny, and finds it difficult to gain weight. Summer time is when she feels better and is able to gain weight.

Her pediatrician, after carrying out an exhaustive physical examination and first-level complementary tests (blood and urine analysis), has not identified any physical pathology that justifies the symptoms.

The exacerbation of pain motivated her to attend the hospital emergency room and was admitted for study. No pathological finding is identified. They recommend her a diet and hygienic behavioral measures that she scrupulously follows, reaching obsessive compliance.

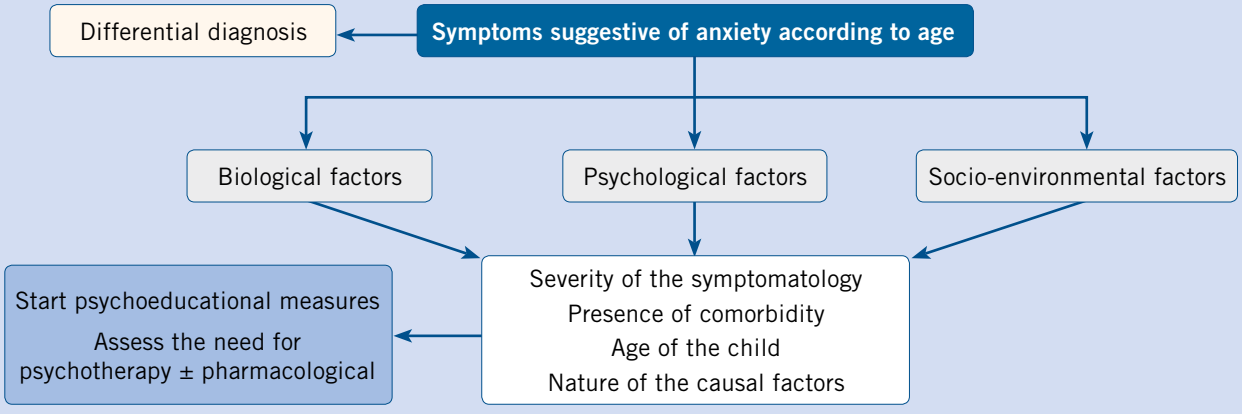
Psychobiography: She lives with her parents and an 11-year-old sister. She has no psychiatric history. She is a brilliant student, who does not settle for a grade that is less than a B. She has a very good behavior, both at home and at school. In elementary school she felt rejected by her classmates, but in middle school she is happy.

She is a shy, inhibited, insecure girl, with the need to anticipate and control whatever she does. Faced with new situations or changes in her life, she becomes very nervous. She has a very hard time during exams and sometimes vomits. She barely interacts with those peers with whom she does not share interests, her goal is to study and achieve very good grades. Her parents describe her as hyper-demanding and a perfectionist. She is having a very hard time during the pandemic. She spends hours studying overwhelmed by the results. Online classes have disoriented her and she has lost control. She is very afraid of getting COVID in case she could infect her parents. She does not wish to go out on the street, because people do not respect the prevention measures. She relates the vomiting to her level of anxiety.

Psychopathological examination: sad mood, significant anxiety, excessive concern about her academic performance and future, with a pessimistic outlook, unrealistically anticipating failure, hypochondriacal fears, unjustified fear of infecting her parents, conciliation insomnia, anxiety towards food as she is afraid that it will cause abdominal pain and vomiting, there is no alteration in the perception of her body scheme.

Family: the only relevant background is the mother diagnosed with irritable bowel disease.

Diagnostic and therapeutic algorithm for anxiety



Accreditation quiz

Subsequently, the following accreditation quiz of Pediatría Integral collects questions on this topic, which must be answered online through the website: www.sepeap.org.
In order to obtain certification by the Spanish "formación continuada" national health system for health professionals, 85% of the questions must be answered correctly. The accreditation quizzes of the different numbers of the journal may be submitted during the period indicated in the "on-line" quiz.

Anxiety in childhood and adolescence

33. Which of the following statements is CORRECT?

a. Anxiety disorders are rare in children.
b. The concurrence of several anxiety disorders in the same patient is frequent.
c. Anxiety disorders have not increased during the COVID pandemic.
d. All anxiety must be considered pathological.
e The age of the child is irrelevant in the clinical manifestations of anxiety disorders.

34. With regards to anxiety disorders in childhood, what is the CORRECT answer?

a. Separation anxiety disorder is typical of adolescence.
b. School phobia is a diagnosis that figures in the DSMV.
c. Behavioral inhibition is a temperamental trait, a risk factor for developing an anxiety disorder.
d. Parental educational styles are not influential in the development of anxiety disorders in childhood.
e. The main comorbidity in anxiety disorders is depression.

35. Which of these SYMPTOMS typically appears in adolescent anxiety disorders?

a. Abdominal pain.
b. Headaches.
c. Irritability.
d. Attention problems.
e. Depersonalization.

36. Regarding the treatment of anxiety disorders, what would be the CORRECT answer?

a. Pharmacological treatment is the first choice.
b. Benzodiazepines are the drug of choice.
c. Cognitive behavioral therapy has not proven to be effective.
d. The first intervention should be psychoeducation.
e. Psychotropic drugs should never be prescribed.

37. One of these drugs is the FIRST choice in Pediatrics for the pharmacological treatment of anxiety disorders:

a Fluoxetine.
b. Olanzapine.
c. Clonazepam.
d. Diazepam.
e. Guanfacine.

Clinical case

38. Given the clinical picture, which of the following suspected diagnoses seems the most ACCURATE?

a. Anorexia nervosa.
b. Depression.
c. Anxiety disorder.
d. Undiagnosed organic pathology.
e. She has no diagnosis.

39. Regarding the diagnosis in this girl, which is the CORRECT statement?

a. The COVID pandemic has not caused an increase in anxiety disorders in adolescents.
b. The precise diagnosis would be Social Anxiety Disorder.
c. Up to 20% of chronic pain without identifiable physical pathology is associated with a comorbid anxiety disorder.
d. Anxiety disorders in childhood remit in adulthood.
e. The diagnosis is so clear that a pediatric medical study was not necessary.

40. Which of these answers is CORRECT?

a. Benzodiazepines are the treatment of choice for anxiety in Pediatrics.
b. In severe cases, the use of selective inhibitors of serotonin reuptake (SSRI) is indicated.
c. The psychotherapy indicated in anxiety disorders is psychoanalytic.
d. Avoiding exposure to the stimulus that generates fear in a child with anxiety is the correct thing to do.
e. Relaxation techniques are not used in children because they are not effective.