Childhood anxiety & depressive disorders: the recognition, assessment & measurement thereof

Dr J. Ferreira • Allegra • May 2014

The Proven Power of Nature
INTRODUCTION

• During childhood: depression & anxiety can be disabling & detrimental with a significant impact on:
  • social
  • academic &
  • emotional development

• Significant contributor to the global burden of disease & affects all types of people in all communities around the world
• At present, affect 350 million people

• Often recurring
• Due to these reasons, & in addition to time lost due to disability, depression is the leading cause of disability worldwide
• WHO predicts: 2030 depression will be second (only to HIV/AIDS) in international burden of disease

• Depression, anxiety disorders, & drug misuse first identified in adolescence & adulthood, found to begin much earlier in life with childhood mental health problems⁵
• Anxiety & depression = common but frequently unrecognized
• 40 years ago, existence of depressive disorders in children = highly doubted
• Believed children lacked the mature psychological & cognitive intellect necessary to experience these difficulties
• Literature & evidence has confirmed that children not only suffer from these conditions (whole spectrum) but also suffer from significant morbidity & mortality associated with them\(^1\)

• Suicide is a growing public concern as successive generations have shown a parallel increase of suicide & depression in the paediatric age group\(^1\)
• Studies have shown that **intervening at an earlier time in life** may incur cheaper & more effective outcomes than later treatment, as well as **save lives**\(^5,7\)
DEPRESSION STATS

DEPRESSION
Depression is one of the most prevalent mental illnesses in the United States of America. All statistics are based on USA Demographics.

- 17% Lifetime Prevalence
- 7% 12-Month Prevalence
- 2% 12-Month Prevalence Severe

Percent of USA adult population

DEPRESSION BY GENDER
Below is a chart showing individuals with a 12-month prevalence of depression among all USA adults by gender.

- 8.1% 18-25
- 4.6% 26-49
- 4.5% 50+

DEPRESSION BY AGE
This chart shows the prevalence of depression varies by age group in the USA.

- 8.7% 18 TO 25
- 7.4% 26 TO 49
- 4.5% 50+

DEPRESSION TREATMENT STATS

- 52% of individuals diagnosed with depression are receiving treatment through a 12-month healthcare program.
- 20% of those are receiving minimally adequate treatment.
- 57% of individuals diagnosed with depression are receiving treatment with a 12-month any service use, including healthcare.
- 21% of those are receiving minimally adequate treatment.
EPIDEMIOLOGY

• 2% of pre-pubertal children
• 5-8% of adolescents
• Prevalence of depression appears to increase in successive generations of children with onset at earlier ages\(^1,^3\)
• Gender ratio is equivalent in pre-pubertal children, but increases in females with a 2:1 ratio (females: males) in adolescents [Girls are more likely to develop anxiety & depression in adolescence] \(^1,^7\)
• Pre-adolescent children, most common anxiety disorder = separation anxiety disorder

• Diagnoses of social anxiety or full panic disorder are very rare in young – still need to develop intellectual capacity for the sophisticated distortions necessary for these disorders to develop

• Adolescence: separation anxiety declines as a natural drive towards increasing independence emerges

• Concerns of social performance increase, & thus social anxiety increases

• An increased understanding of physical health & mortality results in panic disorder rising\textsuperscript{10}
Figure

Percentage of depressed patients by sex, age, and ADHD subtype

ADHD, attention deficit hyperactivity disorder; ADHD-C, combined subtype; ADHD-I, inattentive subtype.
Factors That May Contribute to Gender Differences in Depression

**Artifact**
- Women more likely to report symptoms and seek treatment
- Possible diagnostic bias

**Biological**
- Differences in brain structure/function
- Reproductive-related hormonal fluctuations
- Genetic transmission

**Psychosocial**
- Effects of gender-specific socialization
- Lower social status
- Abuse
- Coping Methods
- Role or life stress


The Proven Power of Nature
DEFINITION

• Anxiety is a state of distressing chronic but fluctuating nervousness inappropriately severe for the person’s circumstances

• Anxiety is a normal response to a threat or to psychological stress & is experienced occasionally by everyone

• Normal anxiety: root in fear & serves an important survival function

• Dangerous situation, anxiety induces the fight or flight response¹
• Variety of physical changes result: increased blood flow to the heart & muscles, increased heart rate, energy etc.

• However at inappropriate times, occurring frequently, or is so intense & long lasting that it interferes with a person’s normal activities, anxiety is then considered a disorder.

• Anxiety disorders: most common category of mental health disorders¹
• Anxiety distressing - interfere daily functioning - depression\(^1\)
**obstacle to academic performance
CHILDHOOD ANXIETY DISORDERS
CLASSIFICATION

Generalized Anxiety Disorder

• Child worries excessively about a variety of issues [school performance, family issues & relationships with peers] ‘worry wart’

• Tend to be very hard on themselves, striving for perfection, & not always giving themselves credit when they do strive

• Constantly seek approval or reassurance from others⁸
Obsessive Compulsive Disorder (OCD)

• Unwanted & intrusive thoughts, commonly known as obsessions

• Compelled to repeatedly perform rituals & routines (compulsions) to ease anxiety

• Early as 2-3 years of age, although most children are diagnosed at the age of ten years

• Boys tend to develop OCD before puberty, whereas girls tend to develop OCD during adolescence
Panic Disorder

• Diagnosed if a child suffers at least two unexpected panic or anxiety attacks (come on suddenly, & with no precipitating cause or signs)

• Followed by at least one month of concern over having another panic attack, losing control or the feeling as if they are “going crazy”
Post-traumatic Stress Disorder

- Intense fear & anxiety
- May become emotionally numb or easily irritable, or avoid places, people or activities after experiencing or witnessing a traumatic or life threatening event e.g. hijacking, witnessing a car accident etc. 
- Many children will not develop PTSD- Children are resilient & after a transient phase of being fearful or anxious overcome this by talking about their fear, & being reassured by parents & caregivers
- At risk: those who have directly witnessed a traumatic event, had mental health problems, lack a strong support network, who witness violence or abuse at home
Separation Anxiety Disorder

- 18 months - 3 years of age: experience separation anxiety
- At this stage of development it is normal to feel some anxiety, when a parent leaves the room or goes out of sight e.g. leaving a child at daycare for the first time
- Can be distracted from these feelings
- Engaged in a new activity with the environment, crying & anxiety eases

The Proven Product

flordis
clinically proven natural medicines
• When a child is older & unable to leave a parent, or takes a longer time than other children to calm down = SAD
• Prevalence = 4%
• Common between 7 & 9 years of age
• Great anxiety is experienced away from home, or when separated from parents or caregivers
• Extreme homesickness & misery
• Refusal to go to school, camps, sleepovers
• Demand someone stay with them at bedtime
• Worry about bad things happening to their parents or caregivers when apart

flordis
clinically proven natural medicines
The Proven Power of Nature
Social Anxiety Disorder

• Also known as social phobia

• An intense fear of social & performance situations & activities

• Can significantly impair child’s academic performance, participation in activities, attendance at school, the ability to make friends & socialize with peers; & develop & maintain relationships⁸
Selective Mutism

• Children **refuse to talk** where speaking is necessary or expected

• Refusal interferes with school, socially etc.

• Additionally, may stand motionless & expressionless, turn heads away, avoid eye contact – avoid communication to a certain extent
• Have ability to be talkative, & interact normally at home or in places where they feel comfortable & at ease
• Parents may be surprised to learn that children behave in this way outside of the home
• Average diagnosis is between 4 & 8 years of age

The Proven Power of Nature
Specific phobias

• A specific phobia is defined as the intense, irrational fear of a specific object or a situation.
• Avoid situations or the things feared, or endure them with great anxiety.
• Crying, tantrums, clinging to parents, avoidance, headaches, & stomachaches may manifest from this anxiety.
• Unable to identify their fear as irrational (unlike adults).\(^8\)
<table>
<thead>
<tr>
<th>Anxiety Disorder</th>
<th>More Common In</th>
<th>Lifetime Prevalence (DSM-IV)</th>
<th>Presenting Problems Seen In Primary Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalized Anxiety Disorder</td>
<td>Adolescence</td>
<td>5%</td>
<td>Irritability, Unexplained muscle aches, headaches, stomachaches, Sleep difficulties, Inattention/concentration problems, Excessive worry about performance at school and punctuality</td>
</tr>
<tr>
<td>Separation Anxiety Disorder</td>
<td>Childhood</td>
<td>4%</td>
<td>Complaints of physical symptoms upon separation (stomachaches, headaches), Tantrums, School refusal, Nightmares</td>
</tr>
<tr>
<td>Social Anxiety Disorder</td>
<td>Adolescence</td>
<td>3% - 13%</td>
<td>School refusal, Headaches, Stomachaches, Tantrums, Social withdrawal, Crying, Freezing, Shrinking from view</td>
</tr>
<tr>
<td>Specific Phobia</td>
<td>Childhood and Adolescence</td>
<td>10% - 11%</td>
<td>Tantrums, Crying, Freezing, Clinging</td>
</tr>
<tr>
<td>Panic Disorder</td>
<td>Adolescence</td>
<td>1.5% - 3.5%</td>
<td>Unexplained rapid-onset/short duration physical symptoms (chest pain, shortness of breath, trembling, numbness in extremities)</td>
</tr>
<tr>
<td>Post-traumatic Stress Disorder</td>
<td>Childhood and Adolescence</td>
<td>1% - 14%</td>
<td>Irritability, Explosiveness seemingly without provocation, Inattention/concentration problems, Emotional numbing, Nightmares (not necessarily about the event), Repetitive play that acts out the trauma, Physical symptoms (stomachaches, headaches)</td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder</td>
<td>Adolescence</td>
<td>2.5%</td>
<td>Tantrums, Inattention/concentration problems, Irritability, Declines in schoolwork secondary to impaired ability to concentrate</td>
</tr>
</tbody>
</table>
DEPRESSIVE DISORDERS

- Major Depressive Disorder is a common & recurring disorder in children
- Depression is characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, & poor concentration

- Two major types of depression:
  - **Major Depression:**
    At least two weeks duration
    May occur more than once throughout child’s lifetime

  - **Dysthymia:**
    Less severe but chronic form of depression
    Two years

The Proven Power of Nature
• Depression can be long-lasting or recurrent, substantially impairing an individual’s ability to function at work or school or cope with daily life

• Frequently accompanied by poor psychosocial outcome, co-morbid conditions, & high risk of suicide (most severe) & substance abuse

• Adequate treatment & management protocols are required\(^3\)
• Complex interaction of social, psychological & biological factors
• Depression can, in turn, lead to more stress & dysfunction & worsen the affected person’s life situation & depression itself (vicious cycle)

• Primarily classified as unipolar or bipolar
• Secondarily as mild, moderate or severe, with or without somatic symptoms
• Severe depressive disorders are classified according to the presence or absence of psychotic symptoms
Unipolar depression:

• Typical - depressed mood, loss of interest & enjoyment, & reduced energy leading to diminished activity for at least two weeks

• Many people with depression also suffer from anxiety symptoms, disturbed sleep & appetite & may have feelings of guilt or low self-worth, poor concentration & even medically unexplained symptoms

• An individual with a mild depressive episode will have some difficulty in continuing with ordinary work & social activities, but will probably not cease to function completely
During a severe depressive episode, it is unlikely that the sufferer will be able to continue with social, work, or domestic activities, except to a very limited extent.

Bipolar mood disorder:
- Typically consists of both manic & depressive episodes separated by periods of normal mood.
- Manic episodes involve elevated or irritable mood, over-activity, pressure of speech, inflated self-esteem & a decreased need for sleep.
• When mild, depression can be treated without medicines
• However when moderate or severe they may need medication & professional talking treatments (counseling)
SYMPTOMS

• Clinical presentation in children **overlap**s with that in **adults**

• However despite these broad similarities there are several issues that **distinguish** what a child endures to that of an adult\(^\text{10}\)

• All children experience anxiety as a **normal** part of growing up

• Normally different fears & anxieties may be experienced & appear at **different ages**, consistent with a child’s developmental & external processes (hormonal changes, changes experienced at school)\(^\text{10}\) (*see table*)

• Depending on the **developmental capacity** of the individual they may **respond** & behave differently to the same anxiety experienced by an individual of a different developmental capacity

• e.g. a 5 year old school- phobic child may hide behind a couch, whereas a teenager with the same fear will make complicated excuses or feign illness to avoid going to school\(^\text{10}\)
• However, anxieties & changes in mood are only seen as a disorder if they cause significant disruption to a child’s functioning, interfere with daily life, or persist for longer than what is expected\textsuperscript{10}

• Parents play an important role with regards to children’s emotional disorders; & may inadvertently aggravate the problem experienced or help resolve them

• The mental health status of the parent or material circumstances has huge implications for children’s coping resources

• In child mental health services, parents are often centrally involved in treatment\textsuperscript{7, 10}
Symptomatically **anxiety** is characterised by:
- Fear
- Nervousness
- Shyness
- Avoidance & safety behaviours
- Increased vigilance: threat related information
- Distress
- Elevated autonomic arousal
- Unhelpful beliefs (over estimating the threat in a feared situation, & underestimating one’s ability to cope with the situation, & resultant anxiety², 10
Depression:
Depressed mood
Loss of interest
Irritable mood
Difficulty or disturbed sleeping
Difficulty concentrating
Poor academic performance &/ participation
Getting into trouble at school
Change in appetite / eating habits
Feelings of anger
Mood swings
Feelings of worthlessness or restlessness
Frequent sadness or crying
Withdrawing from friends & activities
Loss of energy
Low self-esteem / self worth
Feelings of guilt
Thoughts of death or suicide
(depression is a risk factor for suicide)\(^2,7\)

<table>
<thead>
<tr>
<th>Developmental Stage</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infants &amp; pre-school</strong></td>
<td>Do not have the ability to express feelings of sadness in language, thus presentation of symptoms from behavior, apathy, withdrawal from caregivers, delay or regression of developmental milestones, failure to thrive due to non-organic causes. Parental history, evaluation of parent-child interaction &amp; play interviews essential.</td>
</tr>
<tr>
<td><strong>School-aged children</strong></td>
<td>Cognitively apt to internalize environmental stressors (e.g. family conflict, criticism, failure to perform &amp; achieve academically); display low self-esteem &amp; excessive guilt. Inner turmoil frequently manifests as somatic complaints: headaches, stomach aches; anxiety as school phobia, excessive separation anxiety; irritability: temper tantrums, behavioural problems. Teachers serve as good source of valuable information, should be part of assessment process. NB. Compensation for low self-esteem by trying to please others &amp; be accepted. Due to the appearance of this effort whereby children then excel &amp; behave well, their depression may be overlooked.</td>
</tr>
<tr>
<td><strong>Adolescents</strong> (WHO identifies adolescence as the period in human growth &amp; development that occurs after childhood &amp; before adulthood, from ages 10 to 19)</td>
<td>Often many developmental challenges faced as individual tries to become his/her own person, &amp; distance themselves from their parents, become autonomous, establish an identity. Thus they increasingly depend on their peers. Greater hopelessness &amp; despair may be experienced. Ability to complete suicide is greater. Anhedonia, hypersomnia, weight change, substance abuse risk is higher.</td>
</tr>
</tbody>
</table>
RISK FACTORS

• Inherited, environmental, combination of components:

• Child temperamental inhibition
• Parental anxiety / depression
• Overprotective &/ harsh parenting interactions
• Family history of anxiety & depression
• Previous depressive episodes
• Family conflict
• Divorce
• Re-marriage
• Poor school performance
• Bullying at school
• Internal conflict regarding sexual orientation
• Co morbid conditions e.g. dysthymia, anxiety disorders & substance abuse disorders

At its worst depression can lead to suicide², ⁵
"55.3% of children living with divorced mothers and 59.2% of children living with remarried mothers, suffer from anxiety or depression."National Center for Health Statistics".
DIAGNOSIS

• Studies show only 33% of parents with concerns of a psychosocial nature in their children planned on discussing them with their child’s paediatrician / family physician

• When parents did initiate the discussion with the healthcare practitioner, only 40% responded

• Response rate further decreased when parents were less educated

• Highly indicative that anxiety & depressive disorders are being missed, especially at a critical time when prevention, intervention and treatment protocols are most effective\textsuperscript{1,10}
Signs & Symptoms

- Presence of at least 5 of the following symptoms during a consecutive 2 week period:
  - Agitation, restlessness, and irritability
  - Dramatic change in appetite, often with weight gain or loss
  - Extreme difficulty concentrating and thinking clearly
  - Fatigue and lack of energy
  - Feelings of hopelessness and helplessness
  - Feelings of worthlessness, self-hate, and inappropriate guilt
  - Inactivity and withdrawal from usual activities, a loss of interest or pleasure in activities that were once enjoyed
  - Thoughts of death or suicide
  - Trouble sleeping or excessive sleeping
  - Psychotic symptoms, such as delusions or hallucinations
- Significant distress or impairment
• Evaluation: thorough & complete medical assessment including a structured clinical interview, & the use of various rating scales & tools

• Screening measures need be implemented to identify children in need

• **Pediatric Symptom Checklist**\(^8\):
  • questionnaire used as a routine screening measure
  • 35 item checklist
  • to be completed by parents of 6-12 year old children
  • assess their impressions of their children’s psychosocial function
  • time taken to complete & score questionnaire is less than 5 minutes
  • Relatively good sensitivity & specificity
  • Easy administration
  • Checklist is an invaluable tool to help physician’s better screen patients & focus on most important points in limited time spaces\(^1\)
  • Once the screening has identified a patient, a more detailed psychosocial history should be obtained to assess the need for treatment or referral\(^1,8\)

• **SCARED: Screen for Child Anxiety Related Emotional Disorders**\(^9\)

• Particularly useful in diagnosing, monitoring progression & regression, & monitoring treatment \(^1,10,8\)
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Complains of aches and pains</td>
<td>Never</td>
<td>Sometimes</td>
<td>Often</td>
</tr>
<tr>
<td>2)</td>
<td>Spends more time alone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td>Tires easily, has little energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td>Fidgety, unable to sit still</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5)</td>
<td>Has trouble with a teacher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6)</td>
<td>Less interested in school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7)</td>
<td>Acts as if driven by a motor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8)</td>
<td>Daydreams too much</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9)</td>
<td>Distracted easily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10)</td>
<td>Is afraid of new situations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11)</td>
<td>Feels sad, unhappy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12)</td>
<td>Is irritable, angry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13)</td>
<td>Feels hopeless</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14)</td>
<td>Has trouble concentrating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15)</td>
<td>Less interested in friends</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16)</td>
<td>Fights with other children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17)</td>
<td>Absent from school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18)</td>
<td>School grades dropping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19)</td>
<td>Is down on him/herself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20)</td>
<td>Visits the doctor with doctor finding nothing wrong</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21)</td>
<td>Has trouble sleeping</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22)</td>
<td>Worries a lot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23)</td>
<td>Wants to be with you more than before</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24)</td>
<td>Feels he or she is bad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25)</td>
<td>Takes unnecessary risks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26)</td>
<td>Gets hurt frequently</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27)</td>
<td>Seems to be having less fun</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28)</td>
<td>Acts younger than children his/her age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29)</td>
<td>Does not listen to rules</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30)</td>
<td>Does not show feelings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31)</td>
<td>Does not understand other people’s feelings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32)</td>
<td>Teases others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33)</td>
<td>Blames others for his/her troubles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34)</td>
<td>Takes things that do not belong to him/her</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35)</td>
<td>Refuses to share</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SCARED 9

SCREEN FOR CHILD ANXIETY RELATED EMOTIONAL DISORDERS
BIRMASHER, BORIS M.D.; BRENT, DAVID A. M.D.; CHIAPPETTA, LAUREL B.S.; BRIDGE, JEFFREY B.S.; MONGA, SUNEETA M.D.; BAUGHNER, MARIANNE M.A.

Please mark one box for each statement.

<table>
<thead>
<tr>
<th></th>
<th>NOT TRUE</th>
<th>SOMETIMES TRUE</th>
<th>OFTEN TRUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When I feel frightened, it is hard to breathe.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I get headaches when I am at school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I don't like to be with people I don't know well.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I get scared if I sleep away from home.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I worry about other people liking me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>When I get frightened, I feel like passing out.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I am nervous.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I follow my mother or father wherever they go.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>People tell me I look nervous.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I feel nervous with people I don't know well.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I get stomachaches at school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>When I get frightened, I feel like I am going crazy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I worry about sleeping alone.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>I worry about being as good as other kids.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>When I get frightened, I feel like things are not real.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>I have nightmares about something bad happening to my parents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>I worry about going to school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>When I get frightened, my heart beats fast.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>I get shaky.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>I have nightmares about something bad happening to me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>I worry about things working out for me.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>When I get frightened, I sweat a lot.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>I am a worrier.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>I get really frightened for no reason at all.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>I am afraid to be alone in the house.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>It is hard for me to talk with people I don't know well.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>When I get frightened, I feel like I am choking.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>People tell me that I worry too much.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>I don't like to be away from my family.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>I am afraid of having anxiety (or panic) attacks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>I worry that something bad might happen to my parents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>I feel shy with people I don't know well.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>I worry about what is going to happen in the future.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>When I get frightened, I feel like throwing up.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>I worry about how well I do things.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>I am scared to go to school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>I worry about things that have already happened.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>When I get frightened, I feel dizzy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>I feel nervous when I am with other children or adults and I have to do something while they watch me (for example: read aloud, speak, play a game, play a sport).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>I feel nervous about going to parties, dances, or any place where there will be people that I don't know well.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>I am shy.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
DIFFERENTIAL DIAGNOSIS

• Because a number of medical disorders may mimic depression, history & physical examination, as well as special investigations (laboratory studies) may be requested¹

• Infections:
  - Infectious mononucleosis
  - Human Immunodeficiency Virus

• Neurologic Disorders:
  - Epilepsy
  - Post concussion

• Endocrine:
  - Diabetes
  - Hypothyroidism
  - Hyperthyroidism
  - Addison’s Disease
• Medications:
  - Barbiturates
  - Benzodiazepines
  - Corticosteroids
  - Cimetidine (Tagamet)
  - Aminophylline
  - Anticonvulsants

• Others:
  - Alcohol Abuse
  - Drug abuse & withdrawal
  - Oral Contraceptives
  - Electrolyte abnormality
  - Hypokalemia
  - Hyponatremia
  - Anemia
  - Wilson’s Disease
TREATMENT

• Evidence based treatment guidelines from literature are limited

• Most available data include treatment strategies that are based on extrapolation from data obtained from studies conducted in adults

• Optimal treatment includes a multi-disciplinary approach with the employment of psychotherapy, pharmacotherapy, & education of the patient, family, & caregivers

• Psychotherapy appears to be most useful in most children & adolescents with mild to moderate depression¹
• Initial therapy for children & adolescents with mild to moderate depression; & as an adjunct to medications for children with more severe depression: Tri-cyclic Antidepressants (TCA’s) & Selective Serotonin Reuptake Inhibitors (SSRI’s) \(^1\)

• SSRI’s are better tolerated but not necessarily more efficacious

• 50 to 60% response to SSRI’s & placebo have been shown in children in RCT’s- however these studies included a majority of adolescent children & the efficacy of biological treatment of pre-pubertal childhood depression is almost unknown\(^1,3\)
## Table 1

**SELECTIVE SEROTONIN REUPTAKE INHIBITORS**

<table>
<thead>
<tr>
<th>Medication</th>
<th>FDA Approval Status</th>
<th>Starting Daily Dose</th>
<th>Usual Effective Daily Dose</th>
<th>Maximum Daily Recommended Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>citalopram</td>
<td>not approved for children or adolescents</td>
<td>5-10 mg</td>
<td>20-40 mg/d</td>
<td>60 mg/d</td>
</tr>
<tr>
<td>escitalopram</td>
<td>major depression-12 years &amp; up</td>
<td>2.5-5 mg/d</td>
<td>5-20 mg/d</td>
<td>30 mg/d</td>
</tr>
<tr>
<td>fluoxetine</td>
<td>depression-8 years &amp; up, OCD-7 years &amp; up</td>
<td>5-10 mg/d</td>
<td>10-40 mg/d</td>
<td>60 mg/d</td>
</tr>
<tr>
<td>fluvoxamine</td>
<td>OCD-8 years &amp; up</td>
<td>25-50 mg/d</td>
<td>50-200 mg/d</td>
<td>300 mg/d</td>
</tr>
<tr>
<td>paroxetine</td>
<td>not approved for children or adolescents</td>
<td>5-10 mg/d</td>
<td>10-40 mg/d</td>
<td>60 mg/d</td>
</tr>
<tr>
<td>sertraline</td>
<td>OCD-6 years &amp; up</td>
<td>12.5-25 mg/d</td>
<td>25-100 mg/d</td>
<td>200 mg/d</td>
</tr>
</tbody>
</table>
• Exercise
• Natural Alternatives:
  • Amino Acid e.g. L-theanine
  • Herbal e.g. Ze117, Valerian, 5-HTP, SAM-e (S-adenosylmethionine)
• Additionally, Omega 3 fatty acids shown effective in adult depression as an adjunct to therapy
• A RCT found therapeutic benefit in children between the ages of 6 & 12 years of age suffering with depression

• Dietary
• Cognitive Behavioural Therapy (CBT)
• Anti-depressants
MANAGEMENT

• Identify
• Diagnose
• Treatment: Compliancy & monitoring
• Effective community approaches focus on several actions surrounding the strengthening of protective factors & the reduction of risk factors
• Examples include: school-based programs targeting cognitive, problem-solving & social skills of children & adolescents²
• **Prevention** of depression strategies & programs implemented across the lifespan has provided evidence on the reduction of elevated levels of depressive symptoms:\(^2\)
  
  • optimizing the **child’s environment**
  
  • **parenting interactions** have been shown to be the most important environmental factor to influence a young child’s behavior

  • over-involvement or overprotection by the **parents** (shielding children from natural obstacles & challenges in life) &/ harsh discipline (such a smacking, screaming, physical punishment etc.) predict a young child’s internalizing symptoms

• Thus the main goal of early intervention & prevention programs is to **develop parent’s skills to identify & respond** to their child’s emotionally distressed behaviours in effective ways\(^5\)
• By early intervention, children’s anxiety & depression problems can be reduced to narrow cumulative disparities in mental health & disadvantages later in life\textsuperscript{5}

• School: make accommodations best suited to your child’s individual need. Individuals with Disabilities Education Act (IDEA) in the States allows you to request appropriate accommodations related to a child’s diagnosis [DOE]\textsuperscript{1}

• Positive reinforcement (individualised reward system)
The Proven Power of Nature
REFERENCES

• 1 Son & Kirchner, 2000, Depression in Children & Adolescents, American Family Physician 15;62 (10): pp. 2297 – 2308
• 2 Marcus et al., 2012, Depression: A Global Public Health Concern, WHO Department of Mental Health and Substance Abuse pp. 6-8
• 4 Cash et al., 2004, Depression in Children and Adolescents: Information for Parents and Educators, National Association of School Psychologists Handout, pp. 1 – 3
• 5 Bayer & Beatson, 2013, Early Intervention and Prevention of Anxiety and Depression, Encyclopedia on Early Childhood Development pp. 1 – 7
• 6 Merikangas et al., Lifetime prevalence of mental disorders in U.S. Adolescents (Under Review)
• 7 Anxiety and Depression Association of America http://www.adaa.org
• 8 Pediatric Symptom Checklist: www.brightfutures.org
• 10 Davey, 2012, Clinical Psychology: Topics in Applied Psychology: Chapter 5: Childhood anxiety and depression, Routledge, pp. 71 - 86
THANK YOU