

Anxiety in School-Aged Children with Autism Spectrum Disorders and Similar Conditions



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Characteristics



Of ASD and anxiety



Characteristics of HF Persons (AS, HFA, PDD)

- Qualitative impairment in social functioning
- Qualitative impairment in communication
- Restricted range of interests



“Qualitative impairment” in social functioning means...

- Abnormal range, or style of interaction that cannot be explained by shyness, short attention span, or lack of experience
- Behavior is not modified in response to environment
- Individuals appear to be “out of context”
 - Szatmari, 1991



Social Characteristics

- Impaired use and understanding of nonverbal behaviors
- Limited social and emotional understanding
- Difficulty in perspective-taking
- Lack of reciprocity
- Failure to develop peer relationships
- Tendency to be socially intrusive or awkward
- Few attempts to share enjoyment



“Qualitative impairment” in communication functioning...

- Difficulties in pragmatic use of language
- Difficulty understanding social meanings
- Failure to modify communications in response to behaviors of the listener
- Communications seem “out of context”
 - Szatmari, 1991



Communicative Characteristics

- No general delay in the use of language
- Difficulty initiating conversations and interactions
- Difficulty maintaining conversations
- Absence of “chat”
- Frequent tangents and difficulty staying on topic
- Tendency to be pedantic
- Topics may be circumscribed to own interests
- Literal style



“Qualitative impairment” in range of interests means...

- Extreme interest in one subject that is unusual either in intensity or form
- Play or leisure time limited to special interest
- Communication focused on special interest
- Failure to modulate their interests to social and environmental demands
 - Szatmari, 1991



Characteristics of Restricted Interests

- Content is narrow for age and may be unusual
- Special interest pervades in many aspects of life
- Interest often interferes with social interaction
- May show repetitive motor behaviors
- May have exaggerated interest in routines
- May show intense distress when changes or unpredictable events occur



Associated Conditions

Mental Retardation

Axis I disorders

- Anxiety (including OCD)
- Depression
- ADHD
- Mood

Language disorders

Motor impairments

Seizure disorders

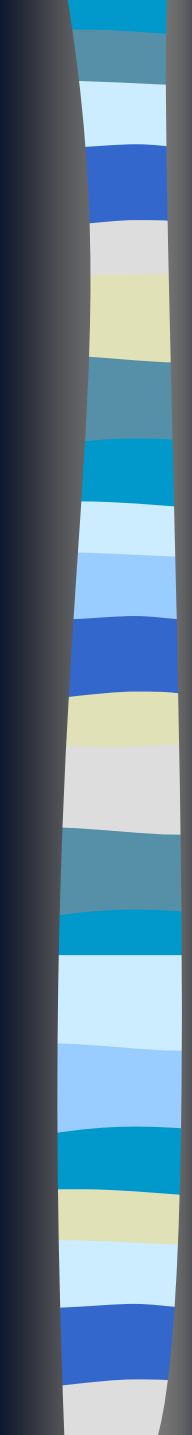
Learning disabilities

- Poor comprehension
- Poor math reasoning
- Poor nonverbal reasoning in some kids
- Poor verbal reasoning in other kids
- Poor abstract reasoning



Anxiety in ASD

- Symptoms of anxiety are quite common in children with high-functioning pervasive developmental disorders (Lainhart, 1999)
- Co-morbid anxiety disorders occur in >80% of children with HFPDD (Muris et al., 1988)
- Anxiety disorders are more common in HFPDD than typically-developing children and in children with other developmental disabilities (Gilliot et al., 2001; Tonge et al., 1999)

- 
- Risk of diagnostic overshadowing (Reiss, 1982)
 - Most common use of psychotropic medication in persons with HFPDD is treatment of anxiety symptoms (Martin et al., 1999)
 - Increased incidence of anxiety disorders in families of persons with HFPDD, suggesting a
 - Complex genetic link (Piven et al., 1991)
 - Possible transactional model of symptom development (Biedel & Turner 1997)



Anxiety and Temperament

- Avoidance of novelty in early childhood is related to symptoms of anxiety expressed later in life (Kagan, 1994)
- Studies of temperament in autism suggest that young children with autism are more avoidant of novelty and less adaptable than typically-developing children and those with other developmental disorders (Hepburn, Rogers, & Shub, 2001)



Symptom expression of anxiety in a person with HFPDD is influenced by:

- Severity of core symptoms of autism
- Severity of associated cognitive impairments (e.g., executive dysfunction, weak central coherence)
- Presence of co-morbid medical disorders
- Life experiences related to coping with a disability
- Combination of these influences

Lainhart (1999)



Anxious Behaviors in Children with ASD

- Avoids novelty
- Withdraws from social situations
- Resists changes in routines
- Prefers rules
- Narrows focus of attention
- Insists on sameness
- Develops safe escape routes
- Increases repetitive behaviors and/or intensity of special interest
- Becomes irritable easily
- Becomes explosive suddenly

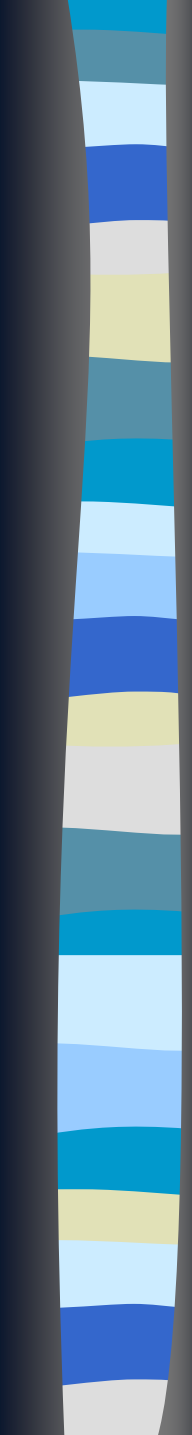
What is anxiety?



With contributions from:

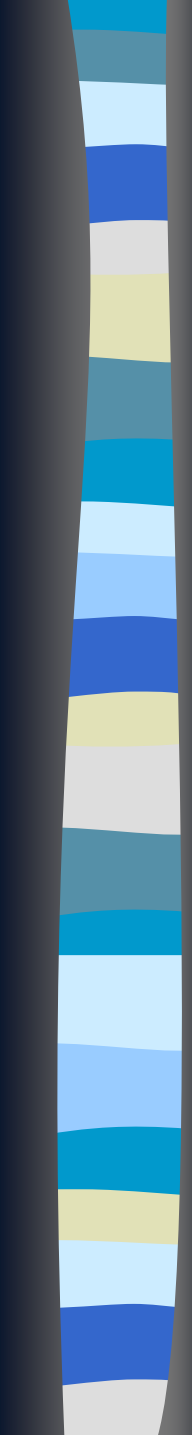
Judy Reaven, Ph.D.; John March, M.D., Karen Mulle, BSN;
Phillip Kendall, Ph.D.; Jeffrey Schwartz, M.D.; John S.
Dacey and Lisa B. Fiore

And particularly: Karen Manassis, Ph.D. and her book:
[Keys to Parenting Your Anxious Child](#)



“I feel anxious when there is a variance between what I expect to occur and what actually occurs.”

“Anxiety is a volcano exploding in my head and then I get in trouble.”



“I am worried all the time. If I am ever not worried, I catch myself and start to worry right away...[because] I think...if I am not worried then I am forgetting something.”



Definitions (Manassis, 1996)

- Fear = “a strong, physical, mental, and emotional reaction to truly dangerous events”
- Anxiety = “fear in the absence of real danger”
- Worry = preoccupation with frightening and upsetting aspects of experience, often anticipated and not yet experienced
- Brave behavior = facing fears, tolerating anxiety, letting go of worries



Definitions (cont.)

- Brave behavior =
 - Facing fears
 - Tolerating anxiety
 - Letting go of worries
 - Riding out panic



Biology of Anxiety

- Fight or flight reaction in response to threat
 - Important for evolution and survival
 - Physical, psychological and emotional
- Sympathetic nervous system gets activated
 - Hormones (like adrenaline) rush in
 - Heart beats faster, breathing becomes faster and more shallow
 - Blood is directed to large muscles, away from peripheral systems



Biology of Anxiety (cont.)

- Psychologically – pick up on physical sensations and:
 - Feeling of great urgency
 - Thinking gets rapid
 - Attention gets overly focused on danger
 - Experience fear and anger; possibly panic



Resolution

- When threat passes, parasympathetic system kicks in to return to calm
- However, memory of danger persists and the “early warning system” will be triggered if similar situation is presented



How common are these problems?

- Between 5-10% of children have anxiety problems that interfere with quality of life
- Even more common in children with co-occurring conditions
 - Autism or Aspergers' – approximately 80%
 - ADHD
 - Learning disabilities



Why are some people more anxious?

- Oversensitive fight-or-flight response – 10% of population (Manassis, 1996)
- Increased perception of threat
- Brain has a low threshold for fear and emotional conditioning (amygdala)
- Anticipation spurs anxiety...which leads to avoidance...which leads to more anxiety...



Developmental Precursors to Anxiety

- Behavioral inhibition (Kagan et al.)
 - Tendency to avoid novelty
 - Small threshold of reactivity
 - Shy
 - Withdrawn
 - Slow to warm
 - Prefers predictability and sameness
 - Approximately 30% of young children who are inhibited develop anxiety later in life



What about the other 70%?

- They learn to cope! Anxiety management is a teachable skill!
- One learns to deal with anxiety by facing one's fears – given enough practice, the biological system will habituate more quickly

Avoidance leads to
more anxiety!





Vulnerability and Stressor Model

- Individuals differ on how vulnerable they are to anxiety and to stressors
 - Some will experience it mildly throughout lifespan
 - Others will experience severely only when stressed
- It's often the interaction of biological vulnerability and environmental stressors that produces anxiety



Types of Anxiety Disorders

(APA, 1994)

- Separation anxiety
- Social anxiety
- Phobias and simple fears
- Obsessive-compulsive disorder
- Generalized anxiety disorder
- Panic attacks



Separation Anxiety

- Difficulty tolerating separation from parent characterized by intense crying, behavioral decompensation, or inability to adapt to new situation without a parent present
- May occur in children of various ages
- Impedes individual's functioning



Phobias and Simple Fears

- Marked and excessive fearful responses to objects or events that interferes with daily functioning
- May include physiological arousal that leads to panic
- Anticipation of feared stimuli may be sufficient to trigger phobic reaction



School Avoidance or Phobia

- Anxious behaviors that impact upon ability to function at school
- Very complex
- We'll address later as a sort of case example



Generalized Anxiety Disorder

- Persistent, chronic anxiety and worry that significantly impacts daily functioning
- May include: difficulty inhibiting distressing thoughts, restlessness, fatigue, difficulty concentrating, dread, irritability, tension, sleep problems



Social Anxiety

- Specific fear of social situations (particularly with unfamiliar people)
- May lead to physiological over-reactivity that resembles panic
- May lead to social avoidance and withdrawal that interferes with daily functioning



Obsessive-Compulsive Disorder

- Obsessions = persistent, uncomfortable thoughts

and/or

Compulsions = repetitive behaviors that are driven by need to reduce anxiety

- Symptoms cause distress, consume inordinate amount of time, and interfere with daily functioning



Panic Attacks

Brief, intense periods of physiological distress characterized by:

- Heart palpitations
- Sweating
- Trembling
- Nausea
- Shortness of breath
- Chest pain

Leads to a “fight or flight” response

May be expressed in explosive or aggressive behaviors, withdrawal, intense fear, avoidance



How do you know that help is needed?

- If anxiety significantly interferes with individual's ability to participate in developmentally-appropriate activities

Special Case of School Phobia



Ideas influenced by:

Marianna Csoti (2003). Social phobia, panic attacks and anxiety in children. Jessica Kingsley Publishers.



School Avoidance or Phobia

- Anxious behaviors that impact upon ability to function at school
- Complex
 - Persons with more than 1 type of anxiety (e.g., social and separation) at risk
 - Persons with co-occurring conditions (e.g, Asperger syndrome and anxiety) at risk
- Different from truancy
 - Usually stay home with caregiver
 - Anxiety is specific to school
- Usually involves a trigger



Describing the Problem

- 5% of children dislike and actively avoid school; however only 1% of children are actually school phobic
- Problem almost always gets worse if not addressed (has a way of spiraling...)
- Often causes considerable distress to families
- Often causes considerable distress for teachers



Peaks in School Phobia (Csoti, 2004)

- Age 5-7 years, usually related to separation anxiety
- Age 11-12, usually relates to changes from a primary to secondary school
- Age 14-16, usually relates to increases in social phobia, depression, and other anxiety conditions



Susceptibility factors: Which children are at risk? (Csoti, 2004)

- Another family member has an anxiety-related problem
- Child temperament – reactive physiology, inhibited
- Stress on family
- Child has a chronic illness or condition requiring increased dependence on parents
- Child has been over-protected
- Child has experienced loss



Triggers – Why Now?

- Being bullied
- Starting school
- Moving to new school
- Being off-school for long period of time in past
- Traumatic experience (direct or witnessed)
- Grief
- Ill parent
- Marital problems
- Domestic violence
- Lack of friends
- Random unpleasant experience



Physical Symptoms

(experienced before or during school time)

- Crying
- Diarrhea
- Feeling faint
- Frequent need to urinate
- Headaches
- Hyperventilation
- Insomnia
- Nausea/vomiting
- Rapid heartbeat
- Shaking
- Stomaches
- Sweating
- Feeling “unwell”



Do.....

- Let the child visit the toilet as often as she wants
- Praise the child whenever possible
- Praise all of the children within the class whenever possible
- Lower expectations
- Think carefully about what is said to the child
- Acknowledge the effort it takes to get to school
- Acknowledge the distress the family

Csoti, 2004



Do...

- Explain the problem to others in a matter-of-fact manner to promote tolerance
- Intervene if there is bullying
- Anticipate and reassure
- Increase success experiences
- Find a way for child to be a part of a group
- Identify a mentor
- Inform all teachers

Csoti, 2004



Don't.....

- Send the child home if complaining of illness without verifying symptoms
- Don't punish or scold for anxiety-related behaviors
- Blame the child, the parents or the teachers
- Discuss the child's anxiety symptoms in front of her without her participation
- Send the message that the child can't cope
Csoti, 2004; March and Mulle, 1997

Tips for Helping a Child who is Anxious



Facing Fears



Fear


- Many fears are developmentally appropriate
- Only become problematic when:
 - Become huge part of child's thoughts
 - Persist for long period of time (a few days for few weeks is normal)
 - Interfere with daily activities
 - Interfere with child's ability to cope with life
 - Become unrealistic and “out of proportion”



Fear becomes anxiety when...

- It is not realistic
- It is overgeneralized
- The individual works really hard to avoid facing it, and the effects spiral

Children may need to
behave with less fear



before they feel less
fear!



Facing fears

- Desensitization – if the child can remain in the feared situation until the fight-or-flight response subsides, the response will be less intense next time
- Mastery comes from hanging in, not avoiding.
- Talking through anxieties may not help, may just focus child on fears and lead to obsessing...action is better than talking



Encouragement

- Validate the child's feelings
 - Say: “it must seem scary”
 - Don't say: “don't be afraid of that.”
- Do not exaggerate child's fears/worries
 - Say: “it's a little scary”
 - Don't say: “it's the scariest thing ever”
- Express confidence in child's ability to cope
 - Say: “You can handle it.”
 - Don't say: “I'll handle it for you”



Realistic Reassurances

- No one has ever died from anxiety.
- Anxiety always goes away.
- You are not crazy – everyone feels this way sometimes.
- Missing one night of sleep (or a meal, or an activity etc.) is not disastrous – you will bounce back.



2 Types of Desensitization

- Flooding – sudden, intense exposure
- Systematic – gradual, hierarchical exposure, from easy to difficult

Flooding is usually not recommended for children with intense fears, but when it happens naturally it can be very therapeutic

Exposure Hierarchy – Example: Fear of Cats

- Looking at pictures of kittens for 2 minutes (then 5 minutes...)
- Looking at pictures of cats for 2 minutes (then 5 minutes)
- Looking at a real cat through a closed window
- Looking at a real cat, no window, 10 feet away
- Looking at a real cat, 5 feet away (then 2..)
- Walking past a cat (proximity is close)
- Touching a cat
- Petting a cat



Tips for Gradual Sensitization

- Allow child to determine when to advance to next step in hierarchy
- Encourage partial success – build confidence; not all or nothing
- Help child face fears as soon as possible – more time leads to more anticipatory anxiety and avoidance



Tips (cont.)

- Works best if exposures occur daily, in small, manageable steps
- Encourage child to stay in feared situation for up to 20 minutes (how long it takes for anxiety to subside); otherwise, you are teaching escape



Rewards for Brave Behavior

Praise and natural consequences will probably be the most powerful reinforcers for brave behavior

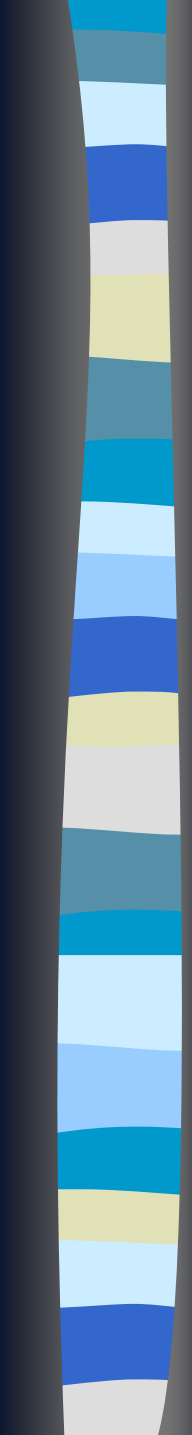
If “artificial” incentives are used (e.g., stickers):

- Don't overdo it – we want the child to perceive self as intrinsically motivated
- Keep it simple
- Use frequent, small rewards

events that
don't happen
often, such as



shots or
haircuts?

- 
- Provide regular doses of information about the event and encourage the child to listen – this encourages habituation
 - If child becomes distressed, encourage and use distracting techniques (later)
 - Add some “real” exposure – visit the doctor’s office (but no shot), visit hairdresser, (but no haircut)

Tips for Helping a Child who is Anxious



Letting Go of Worries



Worrying is a cognitive style

- Hypervigilant -- perceiving threat everywhere; anticipating obstacles before they present themselves
- Difficulty living in the present
- Selective memory for fears and danger
- Underestimate ability to cope – which leads to more fear
- Makes it difficult to be happy



How Worries Present in Children

- May not label it or acknowledge it
- Tense and irritable
- Insist on knowing about future events; dread and anticipation are worse than actual experience
- May have physical symptoms which are sometimes a true physical result of worry (e.g., headaches, stomachaches)
- May have sleep problems
- May have difficulty concentrating – teachers may wonder about ADHD



How to Help a Worried Child

- Distraction with a favorite activity – but not too much; also need to face worries and let them go (like fears)
- Demonstrate that worries are cognitive distortions – thinking that is out of balance



Cognitive Distortions (Beck & Emery, 1985)

- Arbitrary inference – interpreting events in a negative way when there is no evidence for doing so
- Selective abstraction – overly focusing on the negative aspects of a situation
- Overgeneralization – drawing a conclusion based on 1 example

Cognitive Distortions (cont.)

Minimization – underestimating own resources

Magnification – overestimating danger

Dichotomous thinking – reducing information to black and white

Personalization – assuming events reflect on you

Emotional reasoning – feelings = facts



Distortions Common in Children and Adolescents

(Manassis, 1996)

■ Control fallacies – belief that you are responsible for others' problems

■ Fairness fallacy – belief that your desires are fair and just

■ Change fallacy – belief that another person needs to change so you can be happy

■ Shoulds – inflexible personal rules and expectations



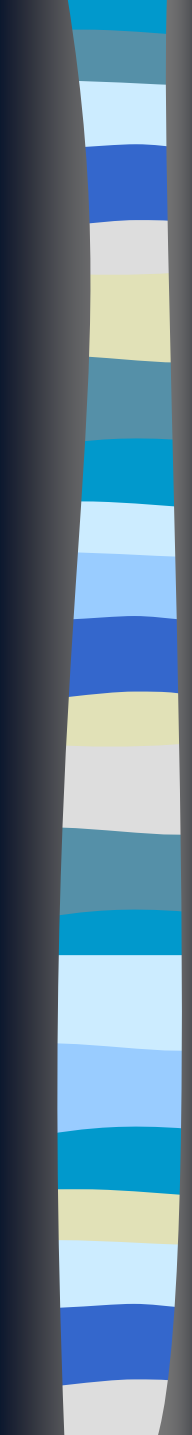
Defeating Worry Comes from Identifying Distortions

- Learn to stop and identify these automatic thoughts
- Put the distortion into perspective through rational thinking – “coping self-talk”
- Begin by modelling own process for child to emulate



When a Child is Worried...

- Do not try to convince them, just give them a reality check
 - If it is a realistic fear, do something about it
 - If it is a worry that is unrealistic, use coping self-talk

- 
- Label the anxiety or worry
 - Makes it concrete
 - Makes sense of physical sensations and may reduce discomfort
 - Makes it external and therefore manageable—

Not: “I am the problem”,

But: “I have a problem”



- Provide realistic reassurances

- “Nobody’s ever died from anxiety”
- “Anxiety is temporary”
- “We have done what we can, the rest is beyond our control.”

- Remember, worrying doesn’t increase control, it only increases anxiety!



Practice Coping

Self-Talk

- How likely is it that what I am afraid of will actually happen?
- Is there another way that events could unfold?
- If the worst actually happens...how bad would that be?
- Is there anything I can do about this situation? If not, how can I take my mind off my worries?



Or, a more simple model:

- What can I think about to reduce my anxiety?
- What can I do to reduce my anxiety?



Kendall's FEAR

- F – “this is Fear”
- E – “What do I Expect to happen?”
- A – “What Action do I need to get through this?”
- R – Reward for getting through



Promoting Independent Coping

Use naturally occurring situations to encourage the child to ask self coping questions

- Child is more likely to succeed when anxiety is mild

- Try to avoid giving answers to the child – instead support their efforts to ask and answer the questions

Tips for Helping a Child who is Anxious



Riding Out Panic

Panic



- Extreme response to an anxiety-provoking event
- Usually happens after onset of phobias
- Intense, unpleasant physical and



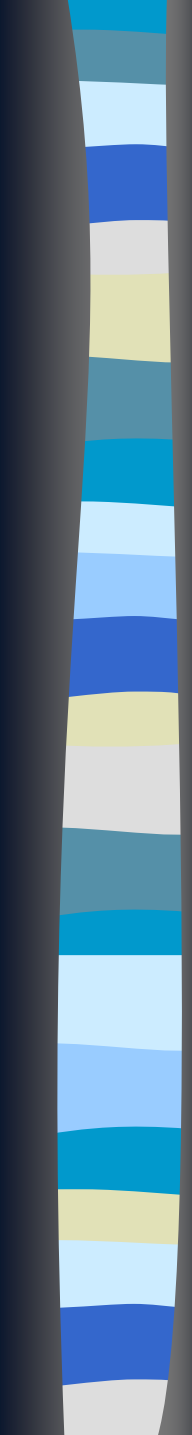
Physical Symptoms

- Abdominal pains
- Chest pains
- Chills or feeling hot
- Feeling dizzy or faint
- Frequent need to urinate
- Nausea and vomiting
- Numbness or tingling feelings
- Heart palpitations and/or rapid heartbeat
- Quick, shallow breathing
- Shaking
- Shortness of breath
- Suddenly feeling hot or cold
- Sweating



Psychological Symptoms

- Feeling detached and removed from events and others
- Feeling a sense of “unrealness”
- Feeling out of control
- Feeling crazy
- Feeling like you’re going to die
- Feeling terrified of being terrified



Susceptibility factors: Who's at risk?

- Child temperament factors – perfectionistic, difficulties adapting to changes, avoidance of novelty
- Family factors – genetic component and environmental component
- Stressful life events – illness, violence, conflict, homelessness, grief



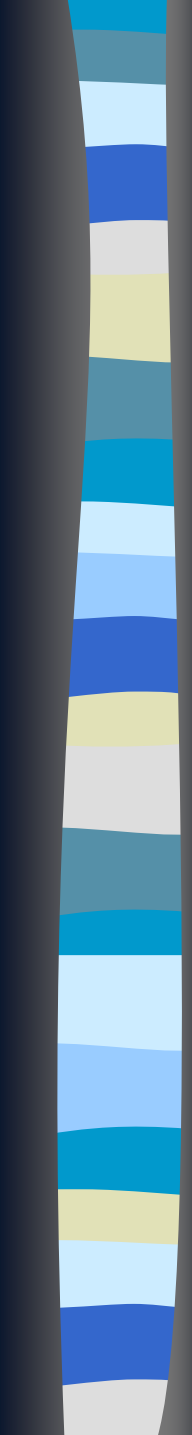
Triggers – Why Now?

- Some form of increased stress is affecting the child
- Recent experience encountering a perceived fear of phobia



Do's

- Empathize with physical experience
- Fight back with facts – it's temporary, it always goes away
- Give alternative, helpful thoughts to replace negative ones
- Remind child to use tools – distraction, changing focus of attention, relaxation
- Show that life goes on
- Tell her how brave she is



Don't....

■ Panic



Prevention of Panic

- Increase exercise – physical benefits and psychological benefits to feeling fit and strong
- Monitor diet
- Get enough sleep
- Teach “Body checks” – teaching the child to monitor his breathing and muscle tension on a regular basis
- Teach basic body calmers – teaching the child to breathe deeply, relax muscles, visualize pleasant situations
- Teach thought stopping – teaching the child to stop negative thoughts that spiral into panic



Prepare the child with explanations

“Your brain is frightening you with thoughts that don’t make sense. It needs to be taught that these thoughts aren’t true, that it got it wrong.” “

“You are feeling sick because of worry. It makes you breathe too hard, makes your stomach hurt, etc. When you are worried, your body makes “worry hormones”, which also make you feel sick. These worry hormones are there to protect you, but they got misfired. You have to wait it out so that your brain and your body can get back into balance.”



Provide Additional Supports to Promote a Sense of Competence

- Teach assertiveness skills
- Teach social skills
- Provide tutoring for an area of academic weakness
- Adjust child's schedule to include more things he is good at and fewer things that are exceedingly difficult



When Panic Happens

- Don't fight it, let it “wash over you”
- Seek distraction – examine something or count something or remember something
- Concentrate on things around you – not on yourself
- Know panic symptoms are temporary
- Know this will happen again



Conclusion

- Anxiety can be manifest as fears, worry, or panic
- Anxiety is biological and psychological
- Children can learn to feel more competent in managing their anxieties



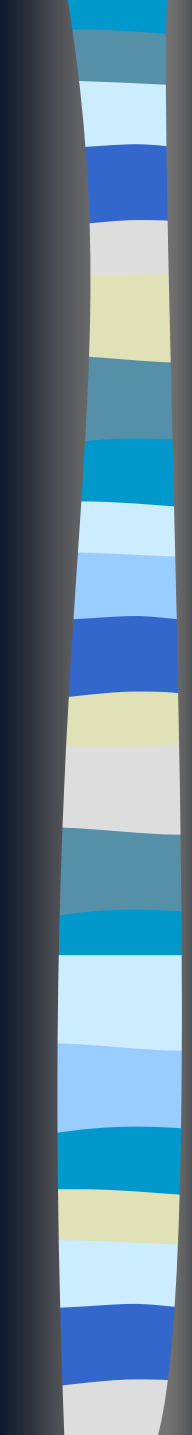
Promoting Independent Coping

- Use naturally occurring situations to encourage the child to ask self coping questions
- Child is more likely to succeed when anxiety is mild
- Try to avoid giving answers to the child – instead support their efforts to ask and answer the questions
- Reduce to 2 steps: identify and question



Additional Strategies

- Use role play, videotape, TV shows, books, cartoons to demonstrate coping models
- Have child observe family members for coping styles
- Identify heroes and how they cope with adversity
- Encourage the child to become a helper



Model problem-solving in 5 steps

- 1) Define the problem.
- 2) Verbalize your options
- 3) Determine your best option
- 4) Act on that decision
- 5) Reflect on your choice.



Considerations Specific to ASD

- Substitute appropriate activities that can achieve same level of arousal
- Increase exercise; decrease caffeine
- Target social/communication difficulties directly
- Consider functional assessment of behavior



Role of Parents/Caregivers

- Coach and cheerleader
- Role model
- Actively promotes generalization from session to home/school
- Models confidence in child's ability to handle anxiety
- "Innoculates" child to anxiety-provoking situations through graded exposure



Conclusion

- Children with HFPDDs are at high risk for developing anxiety disorders, or problems with excessive fear or worry
- Promoting coping and reducing anxiety is often an important goal of treatment and education of children with ASD
- CBT and other strategies can be very effective in adult/children for treatment of anxiety symptoms
- For some children, interventions can be successful without much intensity, for others individual therapy is very helpful