Dyslexia, Dyspraxia, Dysgraphia, ADHD, ASD, APD, Anxiety:

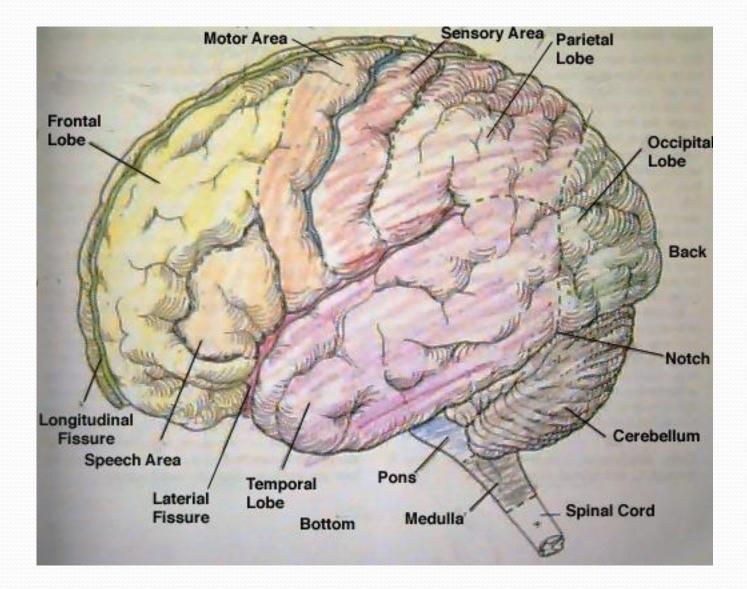
Why your child may have literacy difficulties

Prepared and presented by Dr Pauline M Cogan

St Kilian's German School, 2nd May 2018

Structure of the presentation

- 1. Conditions which cause children to learn differently
- 2. The effects of these conditions on literacy acquisition and mastery
- 3. Adjustments which parents can make to accommodate and scaffold these learning differences



Dyslexia: Types of Dyslexia

- 1. Phonological Dyslexia
- 2. Rapid Automatised Naming Difficulty

Types 1 & 2 can co-occur to produce a Double Deficit

- 3. Working Memory
- 4. Magnocellular Dyslexia
- 5. Cerebellar Dyslexia

Dyslexia Types: Phonological

Individuals with phonological dyslexia are born with natural insensitivity to mother tongue. They have difficulty with the structure and sounds of e.g. English. Typically they have difficulty with:

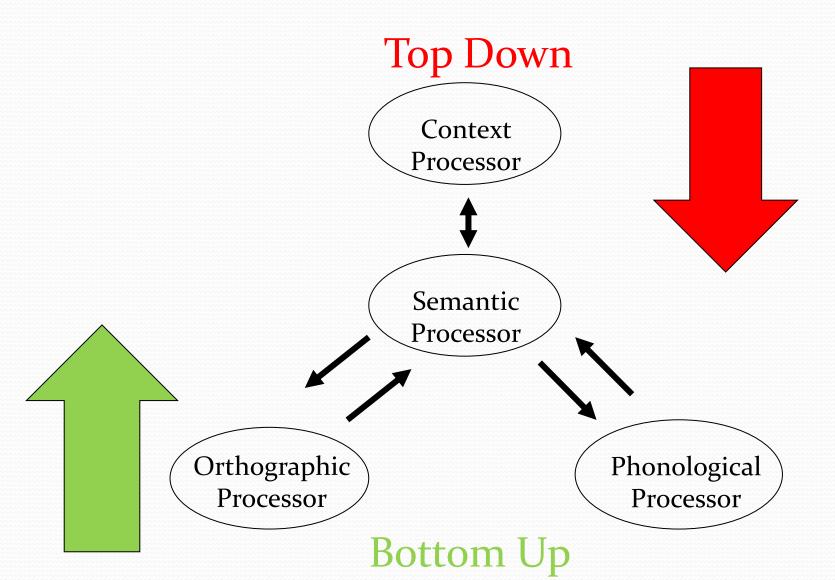
- Names of letters
- Sounds of letters
- Learning phonics
- Distinguishing between *a*, *e*, *i*, *o*, *u*
- Distinguishing difference between *ch*, *sh* etc
- Blending sounds → words
- Segmentation words into individual sounds

Dyslexia Types: Phonological (cont'd)

This leads to difficulties at a further 3 levels

- Decoding root problem in dyslexia
- Reading Comprehension in presence/absence of decoding difficulties
- Retention of Information
 - > Difficulty amassing and retaining information
 - Trouble recalling or summarising what has just been read and connecting it to previous knowledge

All is not lost – Plaut's Triangular Model of Reading



Dyslexia Types: Phonological (cont'd)

Reading from Visual Memory: Orthographic Processing

- Children can learn to read from visual memory.
- Potential area of difficulty
 - They may not remember the visual experience of the word from one page to the next
 - The memory for the sight word may not "stick"



Over-teaching and over-learning

Dyslexia Types: Phonological (cont'd)

- In the past almost all children learned to read by the Look & Say Method.
- The teacher taught individual words to children from their page of reading and then practised these words and the written/printed sentences over and over again until the words are known to automatic levels.
- Children had a Word Box and at home parents helped children with their words.

Dyslexia Types: Rapid Automatised Naming (RAN) in Long Term Memory (LTM)

- RAN deficits difficulty accessing the names of items in LTM
- They are slower to access the
 - > Name of the object
 - Action
 - Image that is incomplete/degraded in LTM
- This causes them to have a
 - Slow/poor speed of item retrieval

Dyslexia Types: Double Deficit

Some individuals with dyslexia have a double deficit.

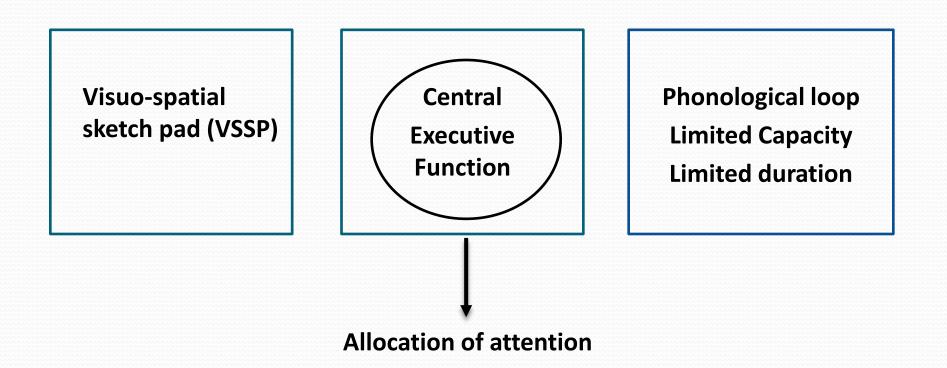
Poor phonological awareness

PLUS

RAN problems making a double whammy

Dyslexia Types: Working Memory (WM)

Structure of WM



Dyslexia Types: Working Memory (WM) (cont'd)

- Problems with their Working Memory for phonological information
- The phonological loop is of:
 - > More limited capacity
 - Shorter duration than normal
- The Central Executive which allocates attention is poorer at paying attention
- VSSP Spatial Memory is Poor

Dyslexia Types: Magnocellular

- Some individuals have a different ratio of large to small cells in the thalmus of the brain. The large cells are for fast processing, such as in the production and processing of sounds in a word.
 - Hearing sound transitions (auditory processing)
 - Visual processing
 - Somatosensory system
 - Balance system

Dyslexia Types: Magnocellular (Cont'd)

- Can cause perceptual difficulties
 - > Ocular wobble due to uneven muscle tension
 - Letters seem to move lines
 - Lines of print seem to blur and drift over one another
 - Print goes into columns
 - Pattern glare a condition which as the Code 57.1 on the International Code of Diseases & Related Conditions (ICD-10)
- A good behavioural optometrist will determine if the child has such a condition

Dyslexia Types: Cerebellar

- Difficulty with
 - Making any process automatic (this includes reading and spelling)
 - Integrating new learning with older knowledge
 - Reaching automaticity

The Square Rule

- Dyslexia has been described as like
 - Swimming through tar
 - Travelling permanently in a foreign country
 - Teaching and over-teaching to the square rule is necessary



= number of teaching sessions to bring automaticity to the dyslexic individual

How to help children with Dyslexia – Know that they:

- Are always tired dyslexia is effortful
- May process slowly
- Need over-teaching/over-learning

May be

- good readers (decoders)
- Poor spellers (encoders)
- Not "get" phonics
- Wonderful orally
- Thrive using a computer

May need

- Scaffolding for written word
- 'Sanctuary'
- One good adult (go-to person)

How to help children with Dyslexia

May be eligible for:

- Learning Support/Resource Hours
- Reasonable Accommodation in Certificate Examinations (RACE)
- Disability Access Route to Education (DARE) in Leaving Certificate
 - > Scribe
 - > Reader
 - Spelling & Grammar Waiver
 - Use of a Separate Centre/Assistive Technology

What can be done to address dyslexia

- Recognise early red flags
- Intervention early with multiple approaches (83% normal schooling if early intervention)
- Vocabulary building for sophisticated oral language
- Teach sight words (priority)
- Teach phonics
- Choose reading material attractive commercial and level readers

PRAISE

- Read to/with the child
- Use kindle/audible.com

PRAISE PRAISE

How to read to the young child

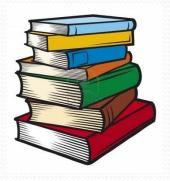
- Sit on the sofa, arm around the child
- Discuss cover and title
- Discuss what the reading is going to be about
- Lay book across both laps
- User finger to 'track' the reading (left to right move)
- Use the turn of the page to ask "what do you think will happen next?"
 - Wait for a reply
- Say "Let's see if you are right
- Discuss what book is about after finished –
- Create Art work about the story you have both read



What can the local library do

Have a range of attractive children's books in

- Level readers Biff, chip, etc
- Barrington Stoke for more advanced readers (Dyslexia Friendly)
- Have writers in to meet children
- Audio books to accompany printed versions of books/audible.com



Dyspraxia - What is it?

The acquisition/execution of coordinated motor skills is substantially below that expected given the individuals chronological age and opportunity for skill learning and use.

Difficulties are manifested as significant and persistent clumsiness (e.g. dropping/bumping into objects) slowness and awkwardness/inaccuracy in performance of motor skills such as:

- Catching
- Cutting (cutlery/scissors)
- Handwriting
- Riding a bike / Negotiating stairs
- Sports participation
- Typing
- Self-care skills and daily living
- Way of sitting
- Zip, button, laces



Notice

- Poor pen/pencil grip (overtight)
- Poor handwriting/poor fine motor control
- Sensory need for deep proprioception effort to self-regulate
- Need for sensory feedback
- Poor organisational skills
- Need for fidgeting and small movements to self regulate
- Mirror movement
- Poor midline crossing

Dyspraxia: Academic Difficulties

Difficulty with

- Presenting narratives
- Ideation (blank page syndrome)
- Flow of ideas
- Task analysis
- Skill mastery of sentence structures

Dyspraxia: Interferes with

Classroom activities such as:

- Using a ruler
- Set square , scissors, measuring etc

Marked slowness of motor movement affects many domains

- Handwriting competence
- Legibility and/or speed of written output
- Academic achievement

Any motor process requiring speed and accuracy is compromised





- Academic/school productivity
- Pre-vocational/vocational activities
- Leisure
- Play

Dyspraxia: How to Help

- Use assistive technology (AT) normal size laptop
- Learn touch typing
- Address blank page syndrome with
 - ✓ Mind Maps (to keep on top of sequence information)
 - ✓ W Words (who, which, when, where, why, how)
- Scaffold sentence formation/structure
- Do all tasks orally first and record on mobile phone
- Transfer to written form (Mum, Dad / Secretary
- Provide Resource Hours (school)
- Scheduled body/rest breaks
- DARE/RACE (IT & Separate Centre, extra time, rest breaks)
- Chair cushion, weighted lap blanket
- Neoprene vest
- Fidget kit





- Swimming (improves midline crossing) breast and overarm strokes
- Horse riding
- Trampolining
- Walking on uneven ground vestibular exercise





Dysgraphia - What is it?

Dysgraphia is due to:

- Deficient fine-motor skills
- Poor dexterity
- Fluctuating muscle tone
- Slow speed
- Unsustainable speed

Difficulties with:

- Motor skill in handwriting transcription movement of muscle groups required to write (DCD)
- Decoding and digit sequence
- Concentration on cognitively demanding composition of sentences to answer questions

Dysgraphia - What is it? (Cont'd)

Difficulties with:

- Decrease in productivity in written tasks
- Critical thinking
- Ideation
- Word finding
- Sensory overload

Dysgraphia – How to help

- IT / tape recorder/Critical thinking
- Scribe for exams
- Extra time and body breaks
- Mind Mapping books (Tony Buzan)
- www.inspiration.com/kidspiration helps children
 - ✓ Develop strong thinking skills
 - ✓ Strengthen reading/writing skills
 - ✓ Build conceptual understanding in Math

Dysgraphia - What can the local library do

Make available

- IT available to public
- Use of recording devices
- Audio books to accompany printed versions of books



Speech and Language and Communication Disorders

- Early onset
- Persistent difficulty in acquisition/use of language spoken, written and sign/other language due to
 - Comprehension/production including
 - **Reduced**

Vocabular Word finding Sentence structure Vocabulary use and sentence connection Explain/describe topic, sentences, events Have a conversation

Speech and Language and Communication Disorders

Negatively Impacts

- Following instructions
- Rehearsing strings of verbal information (phone numbers, lists)
- Ability to remember novel sound sequences
- Academic achievement
- Occupational performance
- Effective communication/socialisation
- Resistant to treatment if complex and not resolved by 5½ years
- Leading to Dyslexia especially comprehension difficulties

Speech and Language and Communication Disorders: How to help

- Early, frequent, intensive therapy by a skilled Speech & Language therapist
- Providing home and school programme
- Very frequent checks following resolution
- Vigilance for academic performance

Speech and Language and Communication Disorders: How Libraries can help



Make available

- Colourful, commercially produced, age-appropriate range of books
- Reading to children by skilled readers using gesture, elaboration, discussion, welcoming child comments

Auditory Processing Disorder (APD)

- A hearing problem affecting 5% of school age children
- Affected individuals cannot process what they hear like their peers because ears and brain do not coordinate
- Something interferes with how the brain recognises and interprets language
- Cause is unknown
- Background noise makes it worse
- Continuum
- Trained audiologist and electrophysiological tests

APD Impairments

- Difficulty paying attention to what has been said
- Difficulty remembering what has been said

Auditory Processing Disorder – how to help

- Create a quiet homework station
- Student to look at you when you are speaking to the student
- Apps to help those who struggle with listening comprehension
- Parenting coach site can help
- Parent training and Information Centre to learn of APD services
- Use a frequency modulator (reduces background noise and makes speakers voice louder so child can understand)
- Speaker wears a microphone and transmitter to sent signal to a wireless receiver worn by the child
- Speech and language therapy to develop good listening/speaking skills

Auditory Processing Disorder – how to help

Particularly challenging for the Class and Resource

Teachers as well as for the student.

- Speak slowly and clearly when giving verbal instructions
- Speak slowly and pause between sentences
- Provide verbal and visual input simultaneously when teaching and providing directions
- Avoid overloading the student with information, data and instructions
- Provide the student with several seconds in order to supply a response to verbal questions
- Know that it takes the student a long time to process and comprehend the questions

A persistent pattern of inattention and/or hyperactivity – impulsivity that

interferes with social, academic, occupation, functioning or development

Before age 12 in 2 or more settings 6 of the following for at least 6 months Inattention

- Poor attention to detail
- Poor sustained attention conversation (lecture, lengthy reading)
- Failure to follow instructions
- Avoids tasks requiring sustained mental effort
- Loses necessary items
- Forgetful of daily activities

- Careless mistakes
- Failure to listen when addressed
- Failure to follow instructions
- Poor organisation/sequencing difficulties, meeting deadlines, belongings
- Easily distracted

A persistent pattern of inattention and/or hyperactivity – impulsivity that

interferes with social, academic, occupation functioning or development

Before age 12 in 2 or more settings 6 of the following for at least 6 months Hyperactivity-Impulsivity

- Squirming, fidgeting, tapping hands/feet
- Runs/climbs inappropriately
- On the go (motor)
- Blurts out Answer before Question finished
- Interrupts others

- Leaves seat inappropriately
- Noisy play
- Talks excessively
- Can't wait turn
- Poor modulation

A persistent pattern of inattention and/or hyperactivity – impulsivity that interferes with social, academic, occupation functioning or development

Symptoms may be absent/minimal if individual gets

- Frequent rewards for appropriate behaviour
- Is under class supervision
- In a novel setting
- Engaged in very interesting activities
- Has consistent external stimulation
- Is in a one-to-one setting (e.g. psychologists office)

Impairment in inhibition

- Distractible poor attention hard to learn
- Academic or work performance impairment
- Problems with organisation, foresight
- Late for class, sustaining effort
- Easily loses things, forgetful
- Trouble with transitions
- Poor frustration/tolerance
- Quick to anger
- Rejects loving help
- Excessive emotions
- Thrill seeking behaviour
- Feels calm when in motion
- Following directions/sequencing
- Poor handwriting

ADHD Treatment

• Structured one-to-one setting with frequent novel stimuli

Presenting Material to child with ADHD

- Clear all distractions
- Present material in a vibrant, animated and attention grabbing way
- Establish good eye contact
- Tap on desk (or other code) to return child to focus
- Alter child's attention "This is Important"
- Break down longer direction into chunks
- Check for comprehension
- Child underlines key words of directions
- Encourage student to mark incorrect multiple-choice answers with an X first. This allows a quick start while forcing reading of all choices before final selection
- Allow hyperactive child out of seat to distribute/collect papers etc
- Allow preferential seating in discussion with the student

Help with Organisation: Write it down

- Have 1 notebook and a 3 ring binder for all SS
- Date each sheet of paper as soon as it is touched
- One bi-fold homework folder for all SS. One side for all paper coming home.
 Other side for all paperwork to be handed in
- Have central location only for homework to be filed
- Have an assignment book and use it. Write assignments in it and teacher checks it to train him
- Allow time to write in assignment book for homework
- Tape/stick assignment into assignment book
- Have a monthly calendar downloadable from school website. Train in its use for long-range projects including draft dates, 2nd draft dates etc.

Look over daily assignment pad as well as monthly calendar of upcoming commitments/assignments

- Add notes to list
- Correct daily and monthly assignments into a time schedule
- Look over planner including upcoming weeks and write out times you are planning to accomplish tasks today
- Include time for eating, bathing, messaging, TV
- Factor in time for unexpected delays
- Adhere to time schedule
- Child and care giver should go over this schedule as soon as child makes it (ADHD children have poor grasp on time events will take)
- Check/monitor if estimates are good

Encourage the ADHD individual to seek help into future from spouses, secretaries etc.

- Continue to have teaching and supervising of the time schedule
- Know the assignments to be done
- Inform about typical routines
- Hand out written assignments for the week
- Put homework on the school website
- Initial students homework assignment pads after each period
- Notify family of any late assignment
- Don't wait until the mid-term report

Communication between parent/teacher

- Email is best
- Parent calls teacher once a week for update
- Mail a card weekly to teacher with spaces for missed work and comments and then dropped back in the mail
- Comment box
- Allow for expedient make up of late homework through
 - Acceptance of late work 1 day from parental notification
 - > Non punitive detention to complete the work

Communication between parent/teacher

- Have 2 sets of books 1 at home and 1 at school
- Keep students appraised of grades
- Administer a pre-test before a big test before doing poorly on a test
- Use legible methods to externalise problems
 - State aloud the problems and consequences at the time of the event
 - > Use timers/planners to break down tasks into manageable chunks
 - Timers give a tangible face to the nebulous concept of time prevents nagging

Brainstorming ideas – physically sort through them and put them in order

- Provide help at the moment it is needed
- Use resource time to give aid to child with SEN by
 - Check assignment sheets
 - Review books needed
 - Review due dates
 - Review plan for breaking down larger projects into steps
 - Review month calendar

Skills teacher checks for class notes for each SS in the binder daily

- Printer to print out computer notes daily
- Keep it up to the end as the problem will recur if the checking does not happen

Autistic Spectrum Disorders (ASD)

Characterised by deficits in early childhood in

- Social communication
- Social interaction/reciprocity/relationships
- Repetitive behaviour patterns and interests
- Hypo-hyper reactivity to sensory input
- Cause segmented impairment in social, occupational and other important areas
- Uneven profile of abilities

Early signs of ASD

Year 1

- delayed language
- Lack of social interest
- Unusual play pattern

Year 2

- Repetitive behaviours
- Absence of symbolic play, solitariness
- Strong preference, sameness (food, leisure, objects)

ASD and learning

- Hampered through social settings/interaction levels
- Routines/aversion interfere with eating/sleeping/care
- Difficulties in planning organisation and change
- Continued rigidity in adulthood which curtails independence

Educational management of ASD

- Have regular, organised routine
- Combination of psychotherapy, Special Education, Behaviour modification and support for family
- Full spectrum of IQ and mix of abilities
- Help with Executive Functioning (CEO)
 - Organisation
 - > Planning
 - Working memory
 - Inhibition/impulse control

Educational management of ASD

- Help with Executive Functioning (CEO) cont'd
 - Self regulation
 - Time management
 - Prioritising
 - Understanding complex/abstract concepts
 - Using new strategies
 - > Complex
- Encourage flexible thinking

Communication skills that are weak in an ASD child

- The urge to initiate shared social interaction and 2 way communication: theory of mind
- Pragmatic language (language in a social context)
- Knowledge of unwritten rules (personal space)
- Knowing what is/is not impossible (see big picture)
- Symbolic play skills (objects as cup = phone)
- The ability to achieve "joint attention" (pointing)
- Non-verbal (non-spoken) transmission of language facial expressions, body language, tone/prosody of speech

Helping Social Communication

- Social Stories
- > Talk About

Anxiety

"Susan worries so much! All of us used to worry about a test the next day, but she worries about it for days in advance. In fact, she seems to worry about lots of things. She is even worried about *NEXT* year. She tells me that it doesn't make sense, but she just can't help thinking about this stuff. I used to think that she avoided school because she just doesn't like it. Now, I am beginning to think that it is just too painful for her. In order to leave the house now for school, she goes through this little ritual of touching the door three times. It's just so sad to watch".

(p 127 – Kinds in the Syndrome Mix – Martin L Kutscher MD).

Anxiety

"In many nations, there has been a strong trend towards an increasingly educationally based and technologically drive culture. Contemporary society often places an extremely high premium on the value of education, more so than ever before. Now, many parents are preoccupied not just by trying to have their children attend college, but it must be a "good college". Parents worry if their children will be able to support themselves. Unfortunately, this has all created a generation of young people who feel overwhelmed and pushed much of the time. These overscheduled and overly competitive children do not get enough 'down-time', the value of which is often overlooked. Children near to learn to regulate themselves, and appreciate their own needs. A balanced lifestyle is harder to learn than might be imagined".

(p 129 - 130 – Kinds in the Syndrome Mix – Martin L Kutscher MD).

Anxiety Disorders

Have features of excessive fear and anxiety and related behavioural disturbances

> Fear

Emotional Response to real or perceived imminent threat (escape behaviours and thoughts

Anxiety

Anticipation of future threat (muscle tension, vigilance in preparation for future danger – cautious/avoidance behaviours)

Difference in types of objects/situations that induce:

- > Fear
- > Anxiety
- Avoidance behaviour and associated cognitive ideation

They are excessive and persist (6 months +) beyond developmentally appropriate periods.

- Over-estimate dangers
- Many anxiety disorders develop in childhood and persist if not treated
- More common in females
- General Anxiety Disorder
- Separation Anxiety Disorder
- Selective Mutism
- Phobias and (Specific Phobias)
- Panic Disorders

General Anxiety Disorder (GAD)

Thought to be due to imbalance in the loop between Cortex and primitive centres for sensory input and emotion.

Sufferers

- Worry re lots of things (6+) at a time
- Worries are regarded as useless/unwelcome/alien
- Recognise they worry more than peers
- Anticipate future events and worry about them well in advance
- Have strong/more painful, disruptive worries
- Worry about situation, objects others find trivial
- Have insomnia, poor concentration, irritable/on edge
- Have head/stomach aches
- Can be perfectionists (a type of anxiety)

General Anxiety Disorder (GAD)

Perfectionist v Striving for Excellence

Perfectionist	Striving for Excellence
Avoid challenges	Reach for challenge
Focus on end produce	Derive pleasure from it
Attribute success to luck	Attribute success to hard work
Failure equals weakness as a person	Failure equals weakness in one area
Celebrate avoidance of failure	Celebrate accomplishment

A developmentally inappropriate and excessive fear/anxiety re separation from attachment figures as evidenced by 3 of the following features:

Distress/worry

- When anticipating/experiencing separation from home or from attachment figures
- Loss or harm to major attachment figures (e.g. Illness, injury, disasters, death)
- Untoward events (getting list, kidnapped, accident) that causes separation from major attachment figures
- Being alone/with major attachment figures at home/in other settings

A developmentally inappropriate and excessive fear/anxiety re separation from attachment figures as evidenced by 3 of the following features:

Persistent reluctance to:

- Going out/away from home, school/work/elsewhere due to fear of separation
- Sleep away from home/or go to sleep without proximity to major attachment figures

Child/person has repeated:

- Nightmares re theme of separation
- Complains of physical symptoms (head/stomach aches, nausea, vomiting) when separation from major attachment figures is anticipated.



A developmentally inappropriate and excessive fear/anxiety re separation from attachment figures as evidenced by 3 of the following features:

- Fear/anxiety avoidance is persistent lasting at least 4 weeks in children/adolescents and 6 months in adults.
- Fear/anxiety causes clinically significant distress/impairment in social/academic/other areas
- Disturbance not explained by other conditions (e.g. ASD, psychosis)



A developmentally inappropriate and excessive fear/anxiety re separation from attachment figures as evidenced by 3 of the following features:

Compromises	
Child's	Adults
School attendance	Not leaving parental home
Sleeping/nightmares	Not travelling
Not going to camp/sleep-overs	Not working outside the home
Not going away to college	



- Consistent failure to speak out in social situations(e.g. At school) despite person speaks in other situation.
- Has significant consequences on academic/occupational achievements and interferes with normal social communication.
- Duration at least 1 months (not just first month at school).
- Not attributable to lack of knowledge of spoken language.
- Not explained by other communication disorders.



- SM children speak at home but silent before close friends/second degree relatives.
- SM leads to:
 - Academic impairment (teachers can't assess e.g. literacy skills)
 - Social communication failure
- SM child may:
 - Use non verbal means of communication (grunting/pointing/writing)
 - Take part in plays/social encounters where language is unnecessary

Selective Mutism is often associated/accompanied by Anxiety especially Social Anxiety Disorder

and

- Excessive shyness
- Fear of social embarrassment
- Social isolation/withdrawn
- Clinging
- Compulsive traits
- Negativism
- Temper tantrums
- Mild oppositional behaviour

Phobias

Specific phobias are fearful/anxious avoidant behaviours re objects/situations.

The fear/anxiety/avoidant behaviour is:

- Immediately induced
- Persistent and out of proportion to the risk posed (animal, natural environment, blood, injection, injury)

Social Phobia

Social Anxiety Disorder induced in the individual who is:

- Fearful/anxious/avoidant of social situations involving possibility of being:
 - scrutinised/observed (e.g. Meeting unfamiliar people eating/drinking/performing)
- Idea in head they are being
 - Negatively evaluated
 - Embarrassed
 - Humiliated
 - Rejected
 - Offending others

In Specific Phobias there is

- Marked fear/anxiety re specific objects/situations (e.g. Flying, heights, animals, injections, blood).
- Expressed in children by crying, tantrums, freezing, children.
- Immediate fear/anxiety which is out of proportion to actual danger associated with object/situation.
- Active avoidance of situation or endured with intense fear & anxiety.
- Persistent fear/anxiety (6 months +).

Anxiety Disorders (Cont'd)

- Significant distress/impairment in social/occupational & other areas.
- Not better explained by another mental disorder.

Panic Disorder

Recurrent expected and unexpected panic attacks

 Abrupt surge of intense fear/discomfort arising from calm state or anxious state

Anxiety Disorders (Cont'd)

Reaches peak within minutes during which 4 or more of the following occur:

Palpitations	Sweating
Trembling/shaking	Shortness of breath/smothering
Choking feeling	Nausea/abdominal distress
Chest pain/discomfort	Dizziness/faint
Chill/heat sensation	Numbness/tingling
Feeling of unreality	Detached
Fear of losing control of oneself	Fear of dying



At least one of the attacks has been followed by one month or more of:

Persistent concern/worry re additional panic attacks or their consequences above.

Significant maladaptive change relative to the panic attacks (e.g. Avoidance of exercise, unfamiliar situations)



Questions & Answers

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