

When to assess?





Discussion

- ▶ What might impact on your decision of whether to assess or not?



Should I assess or not? When should I stop assessing?

- ▶ What is the purpose of assessment? Will it provide benefit to the patient (either directly or indirectly through informing MDT/diagnosis/family/carers)
 - ▶ If there is no benefit, why assess?
- ▶ What are the risks/ potential harm from assessing?
- ▶ Does the patient have the necessary prerequisites for testing
 - ▶ **Concentration:** Whilst assessment sessions can be shortened and carried out over several sessions, need to be able to be attentive for the time needed to administer any one test.
 - ▶ Pain (particularly headaches); preoccupation with worrying thoughts related to anxiety; fatigue and poor sleep all impact concentration.
 - ▶ **Comprehension**
 - ▶ **Motivation and effort**



Factors that impact on assessment

- Physical problems which affect performance (pain, sensory or motor disturbance)
- Intoxication with alcohol, recreational drugs or some prescription medication
- Current or pre-existing psychiatric disorder or learning disability
- Congenital or pre-existing neurological conditions including previous brain injury, insult or epilepsy
- Some medical illnesses
- Sleep deprivation



Factors which impact on assessment

- Recent psychosocial stressors
 - People for whom the language in which they are tested is not their first language will be disadvantaged
 - Many tests are culturally biased
 - Sub-optimal effort
 - Prior experience and practice
 - Performance may vary from one testing session to another for a variety of reasons so caution in interpreting results from just one session
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Case examples

Came in to do testing session
–only had 2 hours of sleep the night before



Jane



Referred for neuropsychological assessment following subarachnoid haemorrhage – Anxiety ++, post ICU PTSD

Pete

Oliver



Referred for ? Cognitive difficulties following stroke. Very, very slow performance on testing



Anxiety



- ▶ At numerous points during and following neuropsychological assessment anxiety can influence outcome
- ▶ Initial assessment – anxiety can influence how events and experiences are interpreted. E.g. may interpret everyday forgetfulness as evidence for declining memory
- ▶ Testing – how do they appraise the significance and interpret any errors, may result in selective investment of processing resources in rumination about errors, which may then impair performance.
- ▶ Feedback during testing – even comments aimed at being non-specific encouragement such as ‘just do your best’, ‘your trying really hard’ may lend themselves to interpretation in an anxious patient.
- ▶ Feedback of results – try and avoid ambiguity and jargon
- ▶ *So do we assess or not?- clinician judgement/service dependant*



Depression

Cognitive domains often impaired in Major Depression Disorder

- Mental flexibility
- Semantic fluency
- Working memory
- Speed of information processing
- New learning

Cognitive domains infrequently impaired in MDD

- Intelligence
- Receptive language
- Object naming
- Visual-spatial perception

Cognitive domains sometimes impaired in MDD

- Concept formation
- Phonemic fluency
- Psychomotor speed



Fatigue

Fatigue affected by two sets of factors:

- ▶ Those that initiate fatigue (i.e. systemic disease) causing primary fatigue
- ▶ Those that perpetuate or exacerbate fatigue (e.g. depression, sleep disturbance, pain, medication effects, deconditioning) causing secondary fatigue

- ▶ ? Limited evidence for fatigue related performance decrements on assessment
- ▶ But what about sustained performance over the course of a working day?

Sleep

- ▶ Poor sleep impacts on the validity of the interpretation of neuropsychological findings in other healthy people (Waters and Bucks 2011)
 - ▶ Decrease in response time (i.e. on TMT and Digit Symbol)
 - ▶ Attention and vigilance
 - ▶ Learning and memory
 - ▶ Mental arithmetic (slower performance and increased errors)
 - ▶ Executive functions (including working memory, inhibition (increased errors & latency on Hayling test), problem solving, and potential social cognition. Deficits more evident on more complex tasks.
 - ▶ Also effects motor performance/visuospatial skills)
 - ▶ Performance on 'crystallised' abilities less effected
 - ▶ Quantative link with performance worsening with increased times awake
 - ▶ Even relatively moderate sleep reduction can have consequence of cognitive function
- ▶ Difficulties sleeping are intrinsically tied to neuropsychological disorders (fatigue, abnormal sleep/wake patterns, increased night awakenings, sleep related movement disorders etc.) and mental health difficulties



Recommendations for sleep screening in neuropsychological assessment (Water and Bucks 20

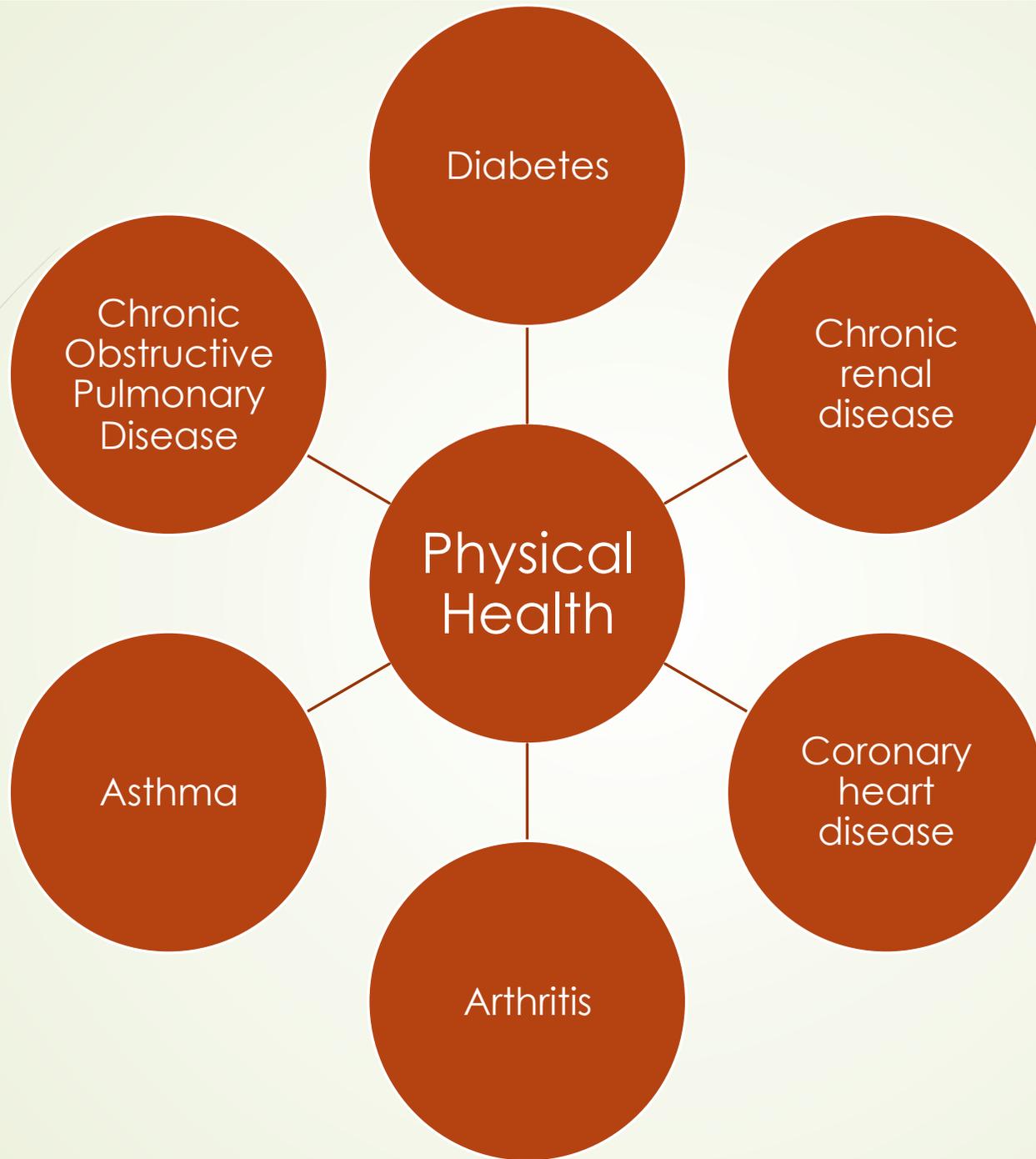
- Ask client (or parents) if they (or their child) have a history of diagnosed sleep disorder
- Ask how they slept on the night before testing. How did it compare to normal sleep?
- Ask them to describe the nature of any sleep difficulties and what treatment (if any) they are using (could be over the counter remedies, alcohol)
- Include questionnaire on sleep quality (e.g. Pittsburgh Sleep quality Index for adults, Children's sleep habits questionnaire)
- Ask if they are aware of feeling sleepy or fatigued during the day
- Ask them to describe impact of sleep difficulties on day to day functioning,

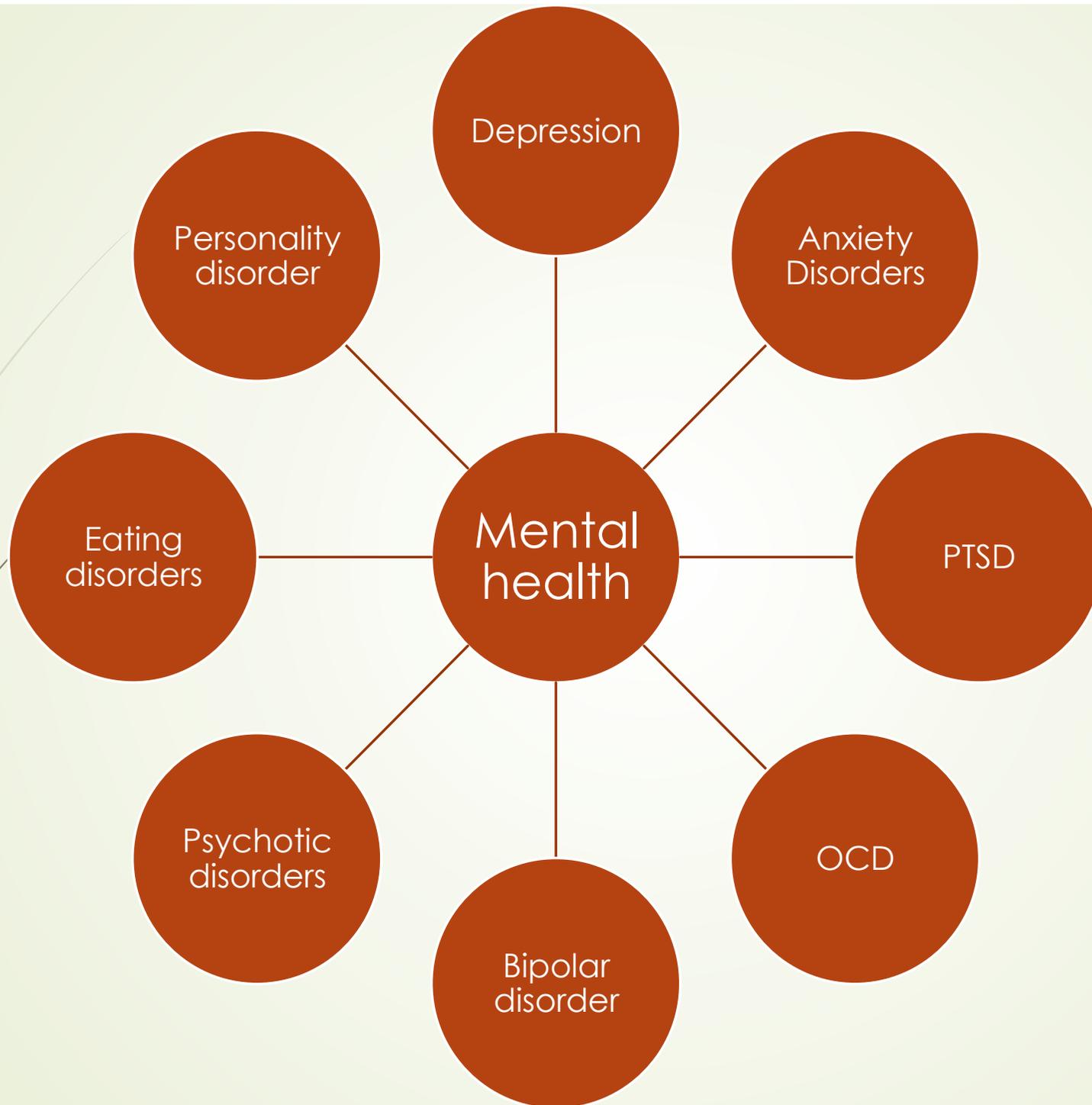


Pain



- ▶ Number of studies suggest chronic pain is associated with neuropsychological changes, most commonly being seen in attention, psychomotor speed and working memory.
- ▶ More difficulties noted with generalised and neuropathic pain than localised pain.
- ▶ Some studies suggests self-reported cognitive problems in people with chronic pain exceed objective neuropsychological findings
- ▶ Objective impairments may be direct result of pain, stem from actual central nervous dysfunction (i.e. brain injury or neurological disease) or occur secondary to pain.
- ▶ Pain rarely occurs in isolation – sleep disturbance, mood disturbance, soatisation, neurological injury or disease, fatigue, chronic health problems)
- ▶ No impact of opioid treatment? Equivocal result
- ▶ Pain ‘demands attention’





Case example



Previous breast cancer/
chemotherapy

Clinical
Depression

Poor diet, insulin
control, impulsive
behaviour

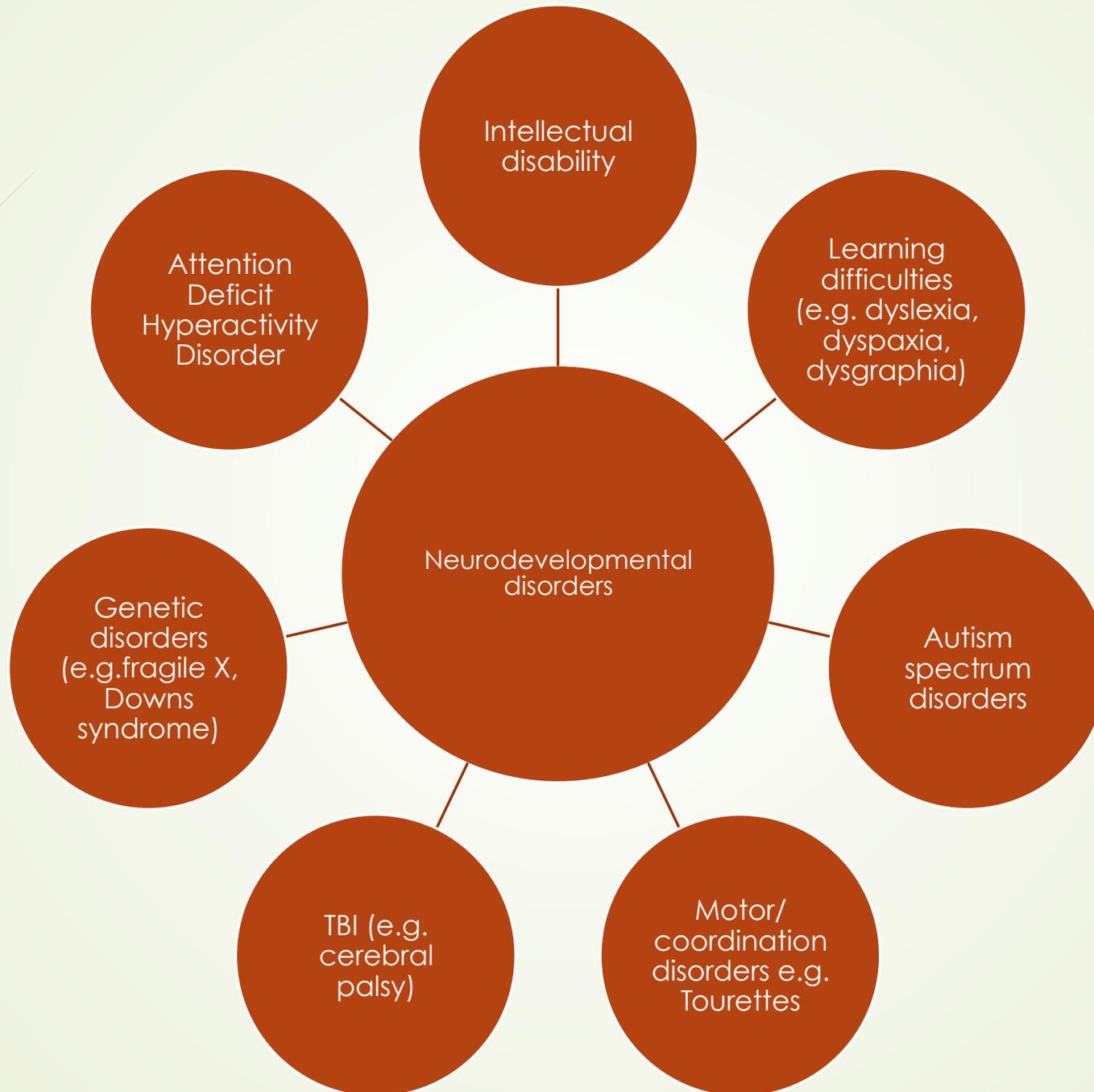
Celiac disease
(no intestinal
symptoms)

Anxiety



Type 1 diabetes

Disturbed sleep





Case vignettes – what may impact on assessment? What more information would you require?

- ▶ I would be grateful if you could see this gentleman (age 65) who has had previous Oligodendroma who appears to be having fluctuation of deteriorating levels of memory. I would be keen to quantify the nature of his executive attention or difficulties and possible monitoring him over timeabout whether he is starting with a degree of dementia or whether anxiety is playing a role.
- ▶ Please see this lady (35 years) with a subarachnoid haemorrhage who has made quite a good recovery but has specific language difficulties, though comes across reasonably well. She certainly has problems with executive function, behaviour, anxiety, insight and adjustment which is making life difficult.
- ▶ I would be very interested in your views on this very interesting young man (age 20) who has a history of ?ADHD, ? genetic problems, quite a lot of moving about as his family are travellers. He has at least four documented skull fractures now related to head injuries, the most recent being 6 weeks ago. I would be very interested in your neuropsychometric testing.