Mental Health Disorders and Dementia

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Mental Health Disorders

- Two most widely used classifications systems: DSM 5, IDC 10
- Hundreds of different disorders in both - systems now relatively similar

- Common disorders - lifetime prevalence rates:
  - Anxiety disorders (generalised anxiety disorder, PTSD, OCD, phobias etc) - 28.8%
  - Mood disorders (depressive episodes, major depressive disorder, dysthymia etc) - 20.8%
  - Impulse-control disorders (disruptive behaviour disorder, conduct disorders) 24.8%
  - Substance use disorders (alcohol use disorder, substance use disorder) - 14.6%

- Psychotic disorders
  - Schizophrenia, schizoaffective, schizophreniform, delusional disorder, bipolar I disorder - < 3%

- Observed lifetime prevalence for any mental health disorder - 46.4%
- Estimated lifetime risk of any disorder at age 75 years - 50.8%
Thus, there is between a 40 and 50% chance that clients presenting for memory clinic/dementia assessments have had, do have, or will develop a mental health condition.

All of the major mental health conditions are associated with reduced/impaired cognitive functioning.

It is important to:
1) screen for these conditions
2) understand the impact they may have on diagnosis, treatment and illness course
Features of Common MH Disorders

- **Anxiety**: Generalised Anxiety Disorder, phobias, panic attacks
- **Depression**: Depressive episodes, Major Depressive Disorder, Dysthymia
- **Obsessive Compulsive Disorder (OCD)**: Obsessions and/or compulsions.
- **Post traumatic Stress Disorder (PTSD)**: Flashbacks, nightmares, dissociation
- **Schizophrenia**: Delusions, Hallucinations, Disorganised speech/behaviour, Negative sx
- **Bipolar Disorder**: Manic Episodes, Hypomanic Episodes, Depressive Episodes
- **Impulse Control Disorders**: Problems in the self-control of emotions and behaviours
- **Substance Use Disorders**: Alcohol Use Disorder, Substance Use Disorder
Personality Disorders:

Paranoid: distrust and suspiciousness such that others’ motives are interpreted as malevolent

Schizoid: detachment from social relationships and a restricted range of emotional expression

Schizotypal: acute discomfort in close relationships, cognitive/perceptual distortions, eccentricities

Antisocial: disregard for, and violation of, the rights of others.

Borderline: instability in interpersonal relationships, self-image/affects, marked impulsivity

Histrionic: excessive emotionality and attention seeking

Narcissistic: pattern of grandiosity, need for admiration, and lack of empathy

Avoidant: social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation

Dependent: submissive and clinging behavior related to an excessive need to be taken care of

Obsessive-compulsive: preoccupation with orderliness, perfectionism, and control
Screening and Assessment

- Always screen for mental health conditions
  - Ask clients about their mental health, past and present
  - Get clients to fill in/self report on their current mood mental health
    - DASS - Depression, Anxiety and Stress Scale (21 items, or 42 items)
    - HADS - Hospital Anxiety and Depression Scale (14 items)
  - Follow up with more in depth assessment if needed
    - Beck Depression Inventory (BDI-II), Beck Anxiety Inventory (BAI-II), Geriatric Depression Scale (GDS), Altman Self-Rating Mania Scale (ASRM) etc

- Always ask clients about their substance use
  - Drugs and alcohol
  - Current and past
Mental Health and Cognition

- All of the major mental health disorders are associated with changes/alterations in cognitive functioning
- This includes:
  - Attention, Concentration, Working Memory, Processing Speed, New Learning and Recall/Retrieval, Executive Functioning
The type and magnitude of cognitive difficulties is variable from both patient to patient and disorder to disorder.

- Difficulties can be characterized as state, trait or scar impairments, or a combination of these.

- Difficulties can be of small, medium or large magnitude.

- Some psychotropic medication is associated with alterations in cognitive functioning.

- Some treatments, e.g. ECT, are also associated with cognitive changes.
**State**: Co-occur with MH symptomatology, increase/decrease with the exacerbation or resolution of symptomatology

**Trait**: stable persistent feature that is detectable prior to illness onset and also present during periods of symptomatic remission

**Scar**: Progressive decline or attenuated development in neurocognitive functioning associated with the onset and progression of MH condition
Neurocognitive Deficits in high prevalence MH disorders

- **Depression**: Moderate reductions in executive function, memory and attention
  Similar difficulties in remitted depression but to a smaller magnitude
  State and scar impairments

- **Anxiety**: Social anxiety disorder - visual scanning and visuoconstructional reductions, as well as reduced verbal memory on certain activities

- **Substance Use Disorders**: Alcohol - reduced verbal learning and recall, visual spatial functioning, working memory, motor speed, executive functioning, verbal fluency.
  Recovery can be seen across domains with periods of abstinence
  State + scar impairments
Psychiatric symptoms also common in dementia

Zuidema et al. (2007)
MH changes can precede cognitive changes in dementia

- 72% of patients experienced depression, changes in mood, social withdrawal, and suicidal ideation more than 2 years before AD diagnosis (Jost, et al. 1996)

- In more highly educated elderly people, depression may be an early manifestation of Alzheimer’s disease before cognitive symptoms become apparent (Geerlings, et al., 2000)

- Affective disorders (depression, bipolar) appear to be associated with an increased risk of developing dementia. Depression may be both a prodrome and a risk factor for dementia (Systematic review, da Silva, 2003)
Neurocognitive Overlap

Depression

- Attention
- Memory
- Executive functioning

Alzheimer’s Disease

- Memory
- Attention
- Executive Functioning
- Language
- Perceptual Motor
- Social Cognition
Depression

Attention
Memory
Executive functioning

Alzheimer’s Disease

Language
Perceptual Motor
Social Cognition
Chronic PTSD

- Nightmares
- Flashbacks
- Dissociations

Attention
Concentration
Executive Functioning

Alcohol

- Gait/motor changes
- Visual Perceptual
- Falls

Hallucinations

Lewy Body Dementia

Gait/motor changes
Visual Perceptual
Falls
So how to differentiate? What should we consider?

- **Course/chronicity of the mental health condition**
  - Longstanding/fairly constant, e.g. dysthymia, generalised anxiety
  - Relapsing and remitting, e.g. major depressive episodes, bipolar disorder
  - New onset, e.g. no previous history of this order, is there a clear etiology/cause?

- **What is the association between the mental health condition and cognition?**
  - Does cognition alter significantly in line with mental state?
  - Did the cognitive difficulties precede or follow the mental health episode?
  - Has the client always had (subtle) cognitive difficulties?
Can we/should we wait till mental health is better/stable?

- Has recent/new treatment been commenced?
- Is the condition chronic? Are they rarely “well” with their MH functioning?
- Have numerous treatments/therapies been tried with little effect?
- Has cognition altering treatment been used recently? (e.g. ECT)
- Are they still using substances? What is the duration of abstinence?

Look at the neurocognitive profile very carefully

- Not just the area of deficits, but the nature and pattern of performances
- Are the memory performances due to poor encoding, or suggestive of a rapid forgetting memory profile
- What are the nature of the behaviour and/or dysexecutive changes? Are they bizarre in nature, related to withdrawal or affective blunting, anxiety driven? Avoidance driven?
Case Vignette 1

- 74 year old woman
- 12 mth history of worsening depression and parkinsonian features
- No previous MH history of note
- Widowed living alone, one surviving son
- Had worked as a typist, stenographer, retail

- Increasingly strained relationship with son
- Some unusual behaviours, ? functional decline
- Recent OD on sleeping tablets, attended ED, ? non-intentional

- Repetitive on the ward
- Presentation: lowered affect, labile mood
- Impression: moderate depression and moderate anxiety
Neuropsychology Assessment

- Attention and mental manipulation
- Psychomotor processing speed
- Visual spatial reasoning, planning, and organisation skills
- Letter based verbal fluency
- Verbal reasoning
- Memory
- Naming
- Orientation
Diagnostic formulation

- Predominant deficits in memory and language functioning on assessment
- Attention actually a strength, EF difficulties related to language/semantic changes
- No significant parkinsonian features on testing
- Clinically depression and anxiety still present (but resolving)
- Appeared more likely that mental health issues were secondary to, or being driven by cognitive impairment
- Neurocognitive profile more consistent with *Mild Cognitive Impairment/Early Alzheimer’s disease*
  - Nature of the memory impairment
  - Language problems
  - Reduced orientation
- Review recommended in 9 to 12 months
Other Clinical Considerations

- Patients may lack insight to their mental health conditions
- Patients may also lack insight to their cognitive problems

- Informant/family/carer information needs to be considered carefully
  - Significant carer/relationship burden for family members of those with chronic MH conditions
  - Higher rates of marital and parent/child disharmony
  - Informants are sometimes very frustrated
  - Can result in tendency to see behaviour as deliberate or wilful
  - Can contribute to the sense that cognition has always been poor/bad, resulting in a difficulty noticing small cognitive changes
  - Many see cognitive problems as more problematic, due to levels of built up general frustration
Get information from an “independent” source if possible, e.g:
- Day program, hobby, activity group, treatment specialist

Clinical judgment/observation is often needed
- Inpatient admission with observation of cognition and behaviour on unit
- Discussion with nursing staff
- Attendance at a regular day/activity program

**Review**
- Neurodegenerative conditions are, by their definition progressive
- If the diagnosis is unclear/uncertain on initial assessment review the client at 12 and 24 months if necessary
- Get comfortable with communicating unclear diagnostic results
- We can’t always tell straight away
Case Vignette 2

- 62 year old woman
- Chronic Bipolar disorder
- Multiple inpatient admissions
- Very concerned about functional memory and word-finding difficulties

- Education to Year 9, office work, home duties, retired
- Divorced, lives alone, four adult children
- Previous 18 month period of heavy drinking several years before

- TIIDM (poorly controlled), hypothyroidism
- On lithium, antidepressant, valium
- Presented as anxious and with lowered mood
Neuropsychology Assessment 1

Visual spatial reasoning, planning, and organisation skills
Semantic verbal fluency
Letter based verbal fluency
Verbal reasoning
Naming
Memory
Psychomotor processing speed
Attention and mental manipulation
Vocabulary
Neuropsychology Assessment 2

- Attention and mental manipulation
- Psychomotor processing speed
- Orientation
- Vocabulary
- Verbal reasoning
- Memory
- Naming
- Letter based verbal fluency
- Semantic verbal fluency
- Vis. spatial reasoning, planning, and organisation skills

Orientation

0.1  2   16  50  84  98  99.9
Diagnostic formulation

- Review assessment 2.5 years later indicated generally stronger cognitive performances in a number of areas
- While also experiencing a depressive episode (as at Ax 1) had a different medication regime with less benzodiazepines
- Dementia syndrome unlikely
- Some reassurance required for patient to accept the findings
- Cognitive difficulties had become a very strong fixation/concern
- Appeared somewhat invested in the idea that she may have dementia
- Looking for diagnoses to explain why she continued to relapse, had functional cognitive difficulties and low confidence in her abilities
- A number of sessions of psycho-education explaining the neurocognitive difficulties that are common in bipolar
- Strategies to assist in daily life recommended
Case Vignette 3

- 85 year old woman
- Long history of Depression and Anxiety
- Attended school until age 15 years, factory jobs
- Widowed with three sons
- Lives with one of her sons

- Ischemic heart disease, hypertension, low vitamin D, hearing impairment, OSA
- Previous hyponatremia, ? from psychiatric medications

- Referred due to staff concerns about her conversational tangentiality and patient reports of memory problems, but ADLs okay
- Presentation: Tangential, verbose, circumstantial, lost train of thought
- Euthymic affect/mood, reporting ongoing chronic anxiety
Neuropsychology Assessment 1

- Attention, mental manipulation + concentration
- Letter based verbal fluency
- Semantic verbal fluency
- Verbal reasoning
- Memory
- Visual spatial reasoning, planning, and organisation skills
- Psychomotor processing speed
- Naming
- General Knowledge
Diagnostic formulation

- Conversational discourse unusual, but longstanding
- Reluctant to participate in any hands-on activities (drawing, writing, object manipulation).
- In assessed areas, difficulties were observed with:
  - Working memory (mental manipulation)
  - Executive functioning
    Processing multi-step instructions, sequencing, strategy generation
- Not currently depressed, but some anxiety
- High number of cardiovascular risk factors likely to be impacting on cognition
- ? cerebrovascular ischemic changes
- OSA

- Recommend neuroimaging and a 12 to 18 month review
Neuropsychology Assessment 2

- Re-referred 22 months later at age 87 years
- Staff concerns about her memory, attention and concentration skills

- Functioning well until son went into hospital 6 months prior
  - Stressed, lowered mood, required respite, perked up (likely taking meds + eating)

- In last two months, since returning home significant deterioration
  - House very cluttered + untidy (longstanding)
  - ? not eating properly (dietician involvement)
  - Constantly falling asleep during day program
  - Falling out of her chair due to loss of proprioception when asleep.
  - Spills her cup of tea or soup, falling asleep with it in her hand
Four-wheel frame
Mildly anxious, non specific worries about family
Verbose, tangential and circumstantial
Self reported some word finding difficulties and that her memory was “up and down”.
Experiencing visual/verbal hallucinations, ? duration:
  - woman with a baby in her house
  - thinking someone was knocking on her door
  - seeing people walk down the driveway
  - hearing voices talking to her, frightened by these

Alert and animated for 10 to 20 mins
Then arousal significantly reduced
Falling asleep rapidly and frequently, often whilst half way through a sentence
“oh did I just nod off then?”, “why do I keep spilling things?”
Initially, could be roused from nodding off (20 mins)
Then increasing difficulty rousing and Ax was abandoned
Neuropsychology Assessment 1

- Attention, mental manipulation + concentration
- Letter based verbal fluency
- Semantic verbal fluency
- Verbal reasoning
- Memory
- General Knowledge
- ? Visual spatial reasoning, planning, and organisation skills
- ? Psychomotor processing speed
- Naming

Orientation
Neuropsychology Assessment 2

- Naming
- Clock Drawing

Pass - Basic Visual screening
Pass - Incomplete letter detection
Diagnostic formulation

- Relatively rapid functional decline in last 6 to 8 months, esp. last 2 months
- Chronically anxious, not presently depressed
- Medication review, assess for UTI’s/infections - ? delirium
- Reasonable possibility of Dementia with Lewy Bodies
- Reduced concentration (and noted at Ax 1)
- Current significant fluctuations in arousal
- New onset, well formed visual and auditory hallucinations
- Likely cognitive decline
- Falls

- DLB +/- Vascular involvement

- Significant safety risks - e.g. cooking at home, ADLs and meals
MH and Dementia over the long term

- Clients with chronic mental illnesses who develop dementia will still need treatment and support for their MH in addition to their dementia.

- Nature of MH and behavioural symptoms may change over time:
  - i.e. they may become more apathetic/withdrawn, or more aggressive/irritable.

- People with dementia may develop new onset MH issues as part of, or in reaction to their dementia:
  - Agitation, apathy and irritability the most common.

- Families/carers of clients with long-term mental health issues may need extra support following the diagnosis, and throughout the course of the illness due to preexisting high carer burden levels.
References

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