MENTAL HEALTH FIRST AID
DELIVERED BY QUALIFIED EXPERTS

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STRESS FIRST AID
DELIVERED BY QUALIFIED EXPERTS

Mental Health First Aid

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If you have to support or signpost friends, family or colleagues with Primary & Secondary NHS care, the NICE Guidelines are invaluable. Clinical guidelines (in this case, those relevant to mental health problems), recommend (and instruct) how healthcare professionals should care for people with specific conditions. They can cover any aspect of a condition and may include recommendations about providing information and advice, prevention, diagnosis, treatment and longer-term management.

These guidelines are also important for health service managers and commissioners of NHS services.

In effect, these guidelines identify patient's rights. They provide patients with information and confirm their rights to services, service deadlines, medications and detail the treatment pathways that must be followed by the various NHS departments that may be involved in your care.

Please contact us directly if you need advice or support with these guidelines.

alcoholuse-disorders-diagnosis-assessment-and-management-of-harmful-drinking-and-alcohol-dependence-pdf-35109391116229

bipolar-disorder-assessment-and-management-pdf-35109814379461

borderline-personality-disorder-recognition-and-management-pdf-975635141317

chronic-fatigue-syndromemyalgic-encephalomyelitis-or-encephalopathy-diagnosis-and-management-pdf-975505810885

coexisting-severe-mental-illness-psychosis-and-substance-misuse-assessment-and-management-in-healthcare-settings-pdf-35109443184325

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delirium-prevention-diagnosis-and-management-pdf-35109327290821

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epilepsies-diagnosis-and-management-pdf-35109515407813

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posttraumatic-stress-disorder-management-pdf-975329451205

psychosis-and-schizophrenia-in-adults-prevention-and-management-pdf-35109758952133

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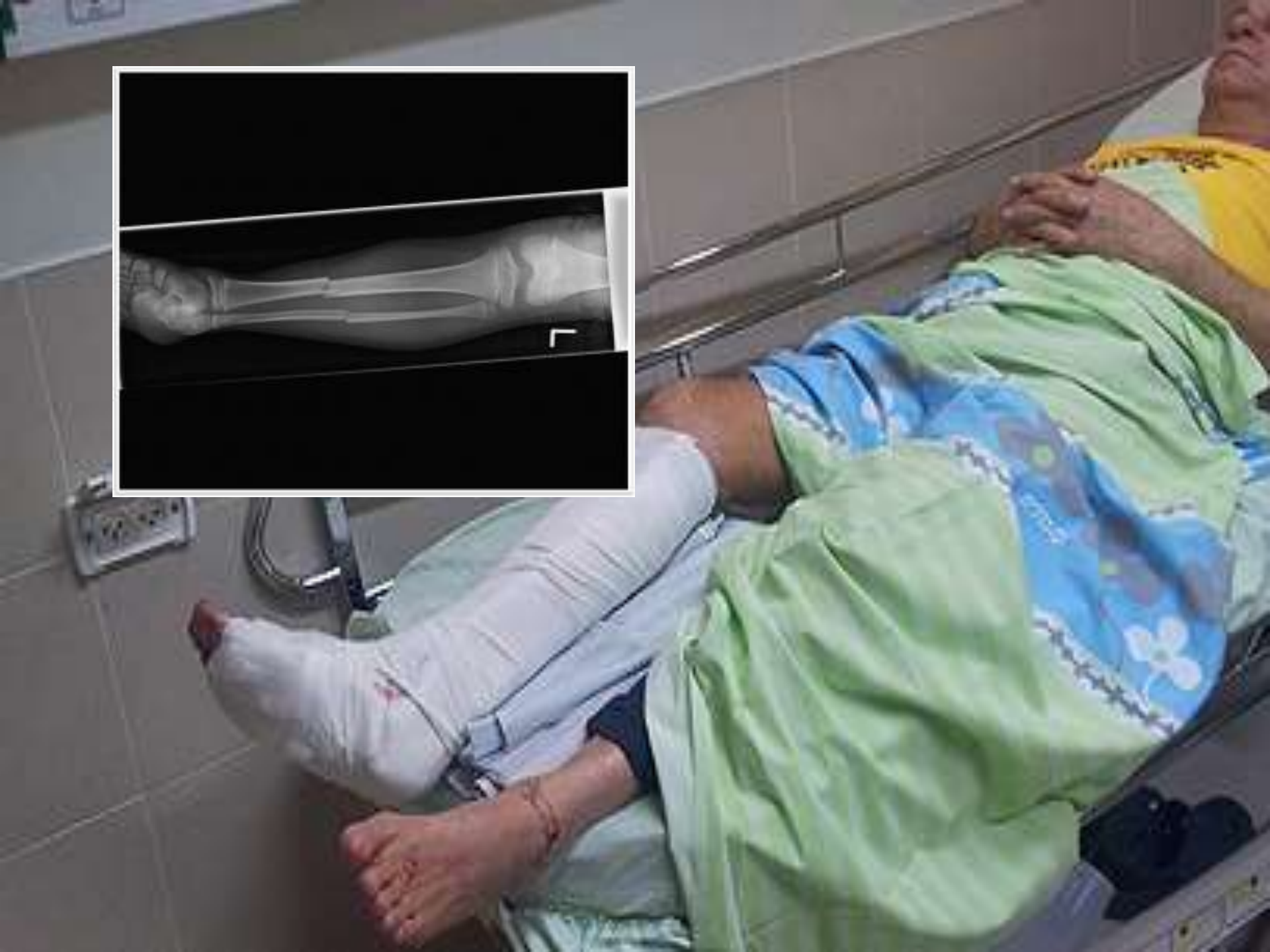


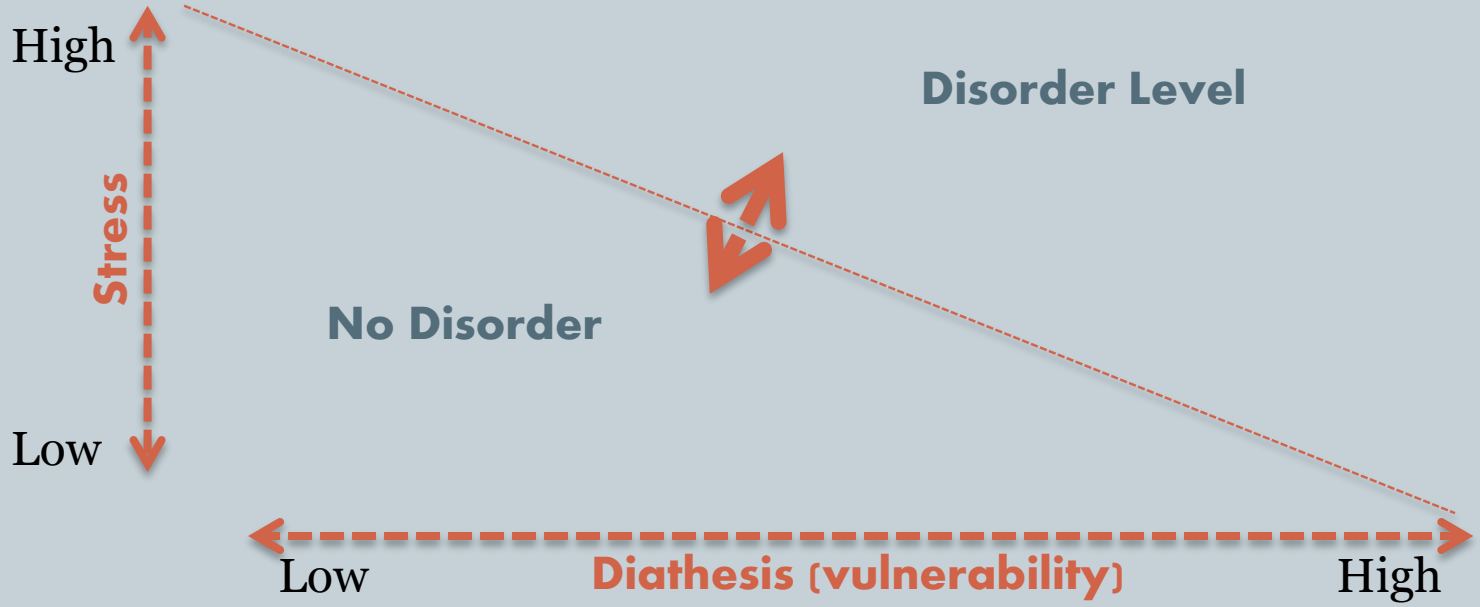
Mental Health First Aid

- **Mental health first aid**
- An training event supporting staff to recognise, identify, understand and support individuals that may be vulnerable to mental disorder or developing a mental health issue.
- Recognising psychiatric problems, developing the right conversational approaches, managing crisis and risk, signposting, supporting and providing appropriate advocacy when required.

Mental Health First Aid

- **Disorders in today's training:**
- Stress Psychology & Psychiatry
- Axis I Disorders (acute symptoms describing a 'state' of mental disorder)
- 1) Major Depressive Episodes;
- 2) Bipolar Disorder;
- 4) Anxiety Disorders including:
  - 5) Generalised Anxiety Disorder (GAD), 6) Panic Disorder, 7) Agoraphobia, 8) Obsessive-Compulsive Disorder (OCD), 9) Post-Traumatic Stress Disorder (PTSD),
- 10) Psychosis & Schizophrenia;
- 11) Eating Disorders;
- Axis II Disorders (personality disorders describing a proposed mental 'trait' resulting in functional and social impairment)
- 12) Borderline Personality Disorder (BPD)
- (plus a potential focus on Antisocial Personality Disorder / Psychopathy)
- Axis III Disorders (Neurocognitive & Medical Disorders that may manifest in Mental Disorder)
- 13) Neurocognitive Disorders – The Dementia Syndrome
- 14) Delirium

Diathesis Stress Model



Defining Health – The World Health Organisation.

- The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "**a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.“**

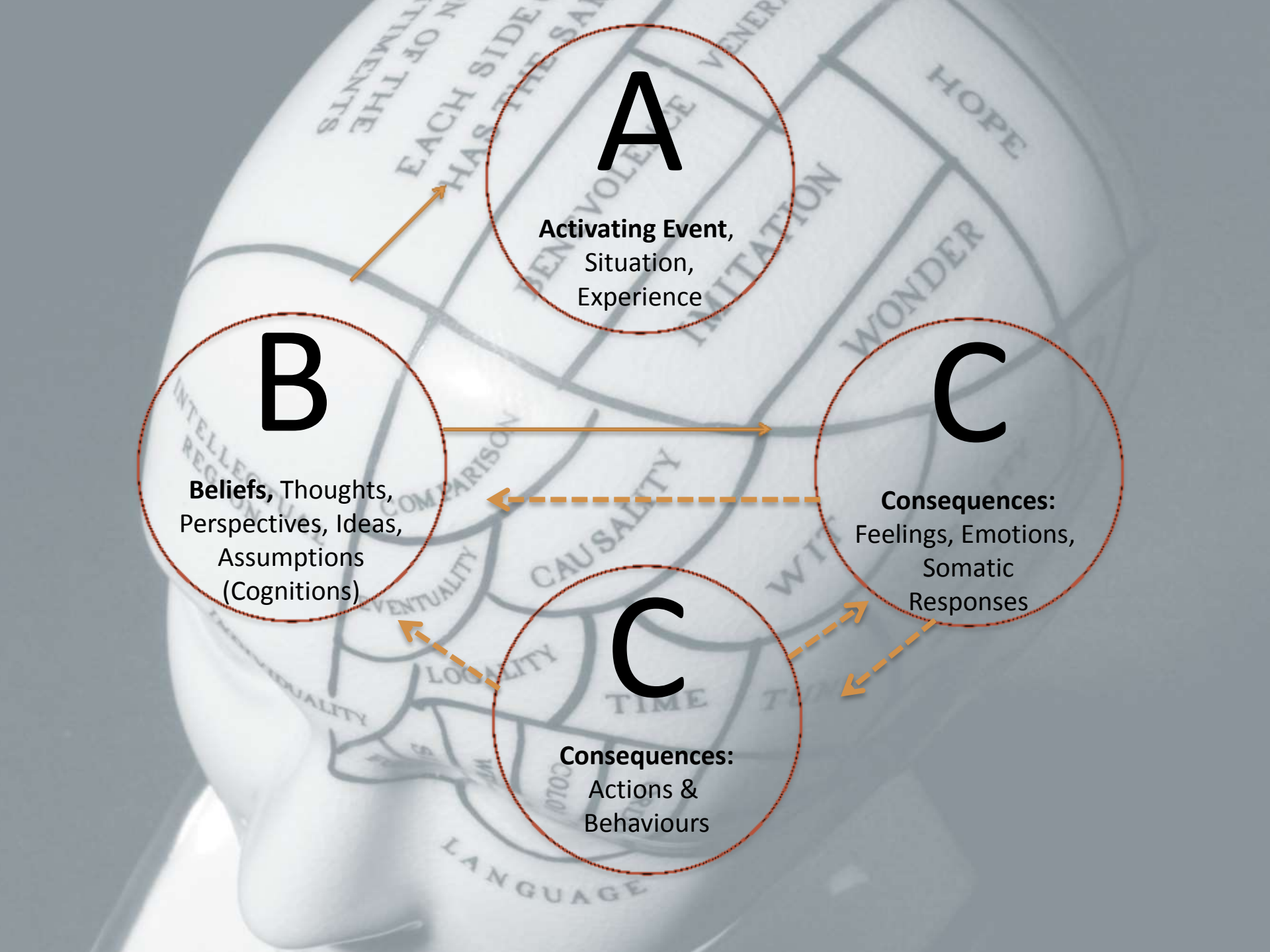
- A key component of the World Health Organisation (WHO) definition of health is the notion of the capacity *to participate in community life,* rather than the traditional narrower view of health as the absence of disease.

- According to this definition, health refers to *"a state of wellbeing in which the individual is able to work productively and fruitfully, and is able to make a contribution to his or her community"* . Mental health encompasses the individual's capacity to cope with internal needs as well as external needs, such as roles within employment.

The experience of mental disorder?

Thoughts	**Feelings**
Behaviours	Functioning / ‘Housekeeping’

X Duration	**X Frequency**	**X Severity / Intensity**	**X Controllability**


A
Activating Event, Situation, Experience
B
Beliefs, Thoughts, Perspectives, Ideas, Assumptions (Cognitions)
C
Consequences: Feelings, Emotions, Somatic Responses
C
Consequences: Actions & Behaviours

Mental Health Recovery

What can help with recovery?

Everyone is different, but it seems that there are some things which most people find help them on their road to recovery:

- accepting you have a mental health condition
- understanding your mental health issue and how it affects you
- finding support from an organisation or support group that focuses on the kind of mental health problem you experience
- good relationships with friends and family or finding new contacts if you feel quite lonely or isolated
- having enough money
- some work or a social activity - such as voluntary or paid work or doing things which build your social confidence
- a good place to live where you feel safe
- looking after yourself – eating well and taking some exercise
- speaking with others who have had similar experiences
- being listened to and being believed in
- keeping a sense of hope
- being well supported if you need to step back from your responsibilities or if you are experiencing a crisis. (Many people use different support services even when feeling they are 'in recovery'.)

Mental Health Recovery

- **What is recovery?**
- Recovery is the process through which we find ways to live a meaningful life, with or without the ongoing symptoms of a condition.
- It is a very personal journey of discovery that involves making sense of what has happened and becoming an expert in our own care, discovering and utilising our own resourcefulness.
- It has three key principles:

- **hope** - pursue your personal goals and ambitions
- **control** - maintain a sense of control over your life and symptoms
- **opportunity** - it is possible to build a life beyond illness.

- **Our principles of recovery**
- The main aim in recovery is for you to take control, make choices and develop a sense of self worth and hope
- Recovery is a unique process because everyone is different - it's a personal journey
- Recovery involves you accepting responsibility for your own wellness
- Recovery is about engagement and inclusion, taking part in your community, engaging in vocational, education and leisure interests and enjoying life
- Recovery requires an approach which considers your psychological, social, environment, spiritual and physical needs.

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Mental Health Recovery

- **Recovery self help**
- The following ten ideas may help to relieve your symptoms:
- Talk to a friend
- Talk to a health professional
- Relaxation and stress reduction exercises
- Healthy eating - what you eat affects how you feel
- Do something 'normal' like washing your hair, shaving or going to work
- Contact help lines
- Wear something that makes you feel good
- Do something that makes you laugh
- Get some little things done
- Do something special for someone else.

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Mental Health Recovery

- **Daily maintenance plan**
- There are a number of small things you can do each day which may help you. These could be included in a daily maintenance plan:
- Eat three healthy meals and three healthy snacks
- Drink at least six glasses of water
- Avoid caffeine, sugar, junk foods and alcohol
- Exercise for at least half an hour
- Get exposure to outside light for at least half an hour
- Take medications
- Have 20 minutes of relax time or meditation time
- Write in a journal for at 15 minutes
- Spend at least half an hour enjoying a fun or creative activity
- Get support from someone you can be real with
- Check in with yourself; how am I doing physically, emotionally, spiritually?
- Go to work if it's a work day.

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Workplace Stress

Somatic symptoms of Autonomic Arousal

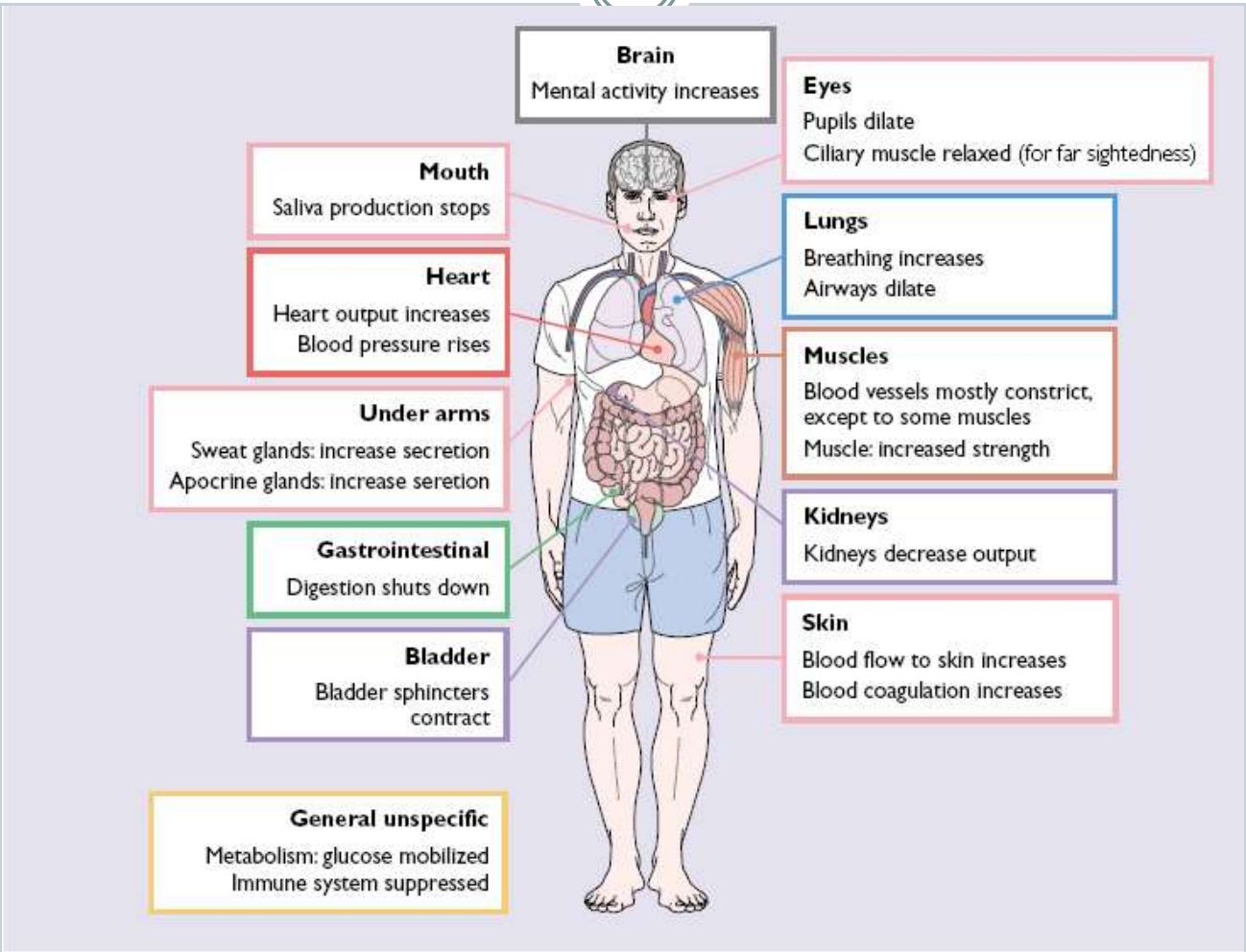
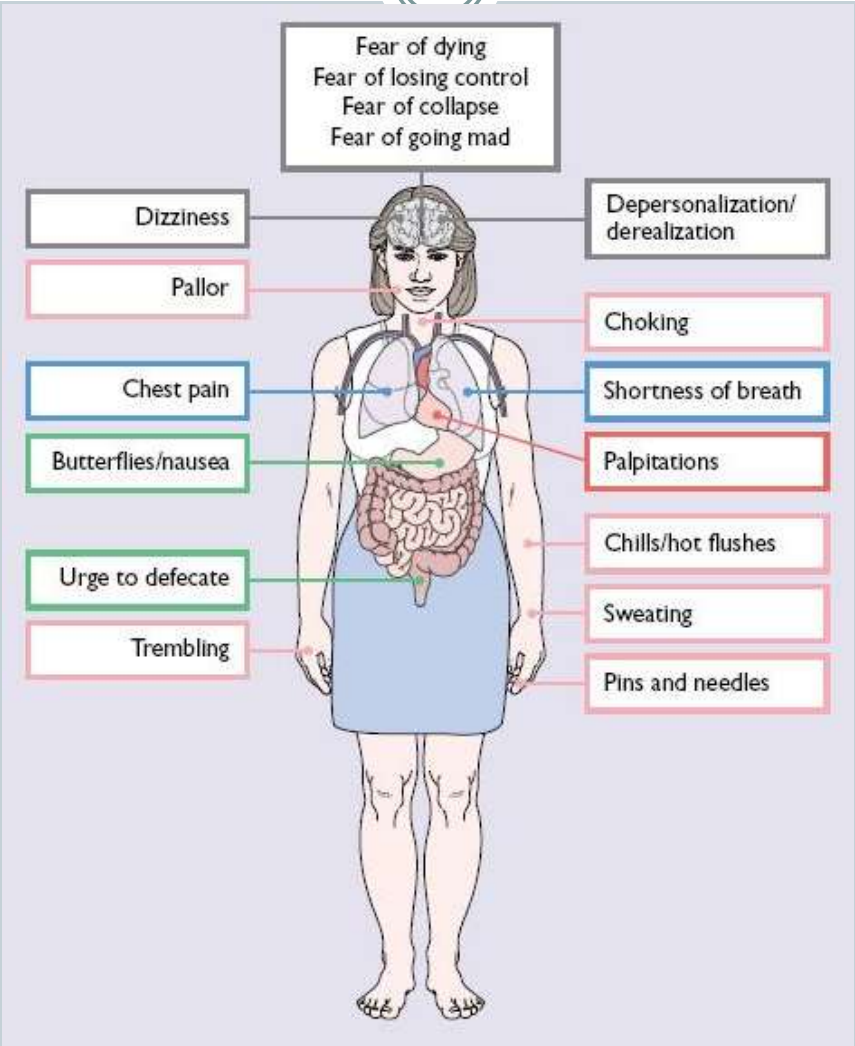


Figure 5.2 The physiologic response to 'flight or fight' stimuli

Somatic symptoms and complications of Panic



Understanding Stress

- Stress is what we experience when the threat and demands of our environment exceed our perceived ability to cope *Goldstein's* (1959)
- Perceived threat suffices. The stressor doesn't have be real – it can be experienced by simple perception, nevertheless it does alter our homeostasis (spider in the garage).
- **Job stress is "the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker (National Institute for Occupational Safety and Health, 1999).**

- **Individual differences:**
- Perfectionism;
- Locus of control psychology;
- Poor communication skills;
- Emotional lability and vulnerability to anger
- Rumination & obsessing;
- Distorted thinking (attributional errors);
- Attachment styles;
- Physiology (HPA Axis response)

Mental Health Awareness

Common mental health problems:

Axis I Disorders (acute symptoms describing a 'state' of mental disorder)

- 1) Major Depressive Episodes;
- 2) Bipolar Disorder;
- 4) Anxiety Disorders including:
  - 5) Generalised Anxiety Disorder (GAD), 6) Panic Disorder, 7) Agoraphobia, 8) Obsessive-Compulsive Disorder (OCD), 9) Post-Traumatic Stress Disorder (PTSD),
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- 14) Delirium

Leadership styles & stress

- According to Offermann and Hellmann (1996), the behaviours of leaders in organisations are related to employee stress. Similarly, van Dierendonck, Jehn and Cummings (2004) posited that the behaviours of managers are likely to impact on the presence or absence of psychosocial hazards in employees' working environment. This means that managers through their behaviours play significant role in employee job-related stress.
- Managers can either stimulate or prevent stress by the behaviours they display towards employees. Recent literatures abound on two main types of leadership styles (Tepper, 2000) (transformational and transactional leadership)

- **Transformational leaders inspire, coach, teach, encourage and support employees to achieve organisational goals;**

- **Transactional leaders reward employees for task completion and punish them for poor performance;**

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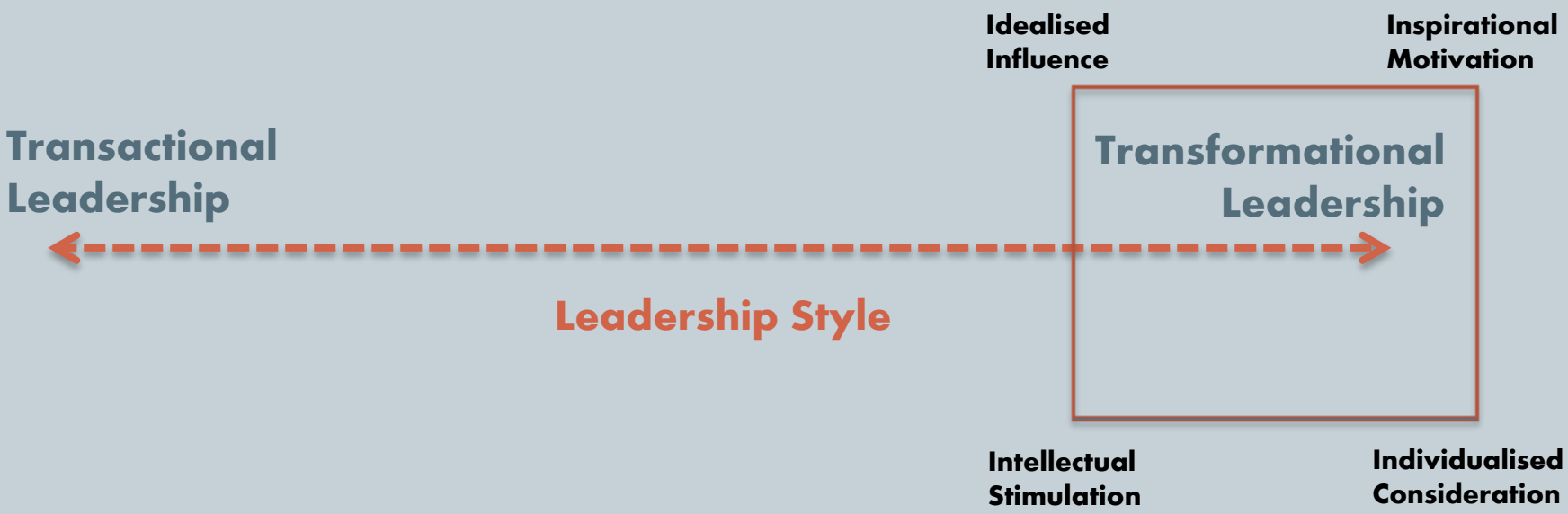
Intrinsic Motivation

Leadership Styles



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Leadership styles & stress

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Examining the Influence of Transformational and Transactional Leadership Styles on Perceived Job Stress among Ghanaian Banking Employees

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Abstract

This study examined the influence transformational and transactional leadership styles have on job stress among employees in Ghana's banking industry. The study made use of structured questionnaires to collect quantitative data. 196 questionnaires were returned by respondents out of 250 administered. The findings revealed a significant negative relationship between transformational leadership and job stress (β = -.193, $p < .05$) and a significant positive relationship between transactional leadership and job stress (β = .165, $p < .05$). From these findings, it is recommended that managers adopt transformational leadership behaviours in order to reduce job stress among employees in Ghana's banking industry. This is a pioneering work in the Ghanaian context where participants have been drawn from 19 different banks; making it possible to get general views of employees concerning the subject.

Transactional Leadership

- Transactional leaders reward or discipline followers with regards to their performance.
- Bass (1985) indicated that transactional leaders "pursue a cost-benefit, economic exchange to meet subordinates' current material and psychic needs in return for contracted services". Also, he argued that leaders' promise of rewards and benefits to followers influence the followers to perform tasks and achieve predetermined goals (Bass, 1990).
- Transactional leaders believe that task completion is premised on exchange of desirable reward to followers.
- According to Bass (1990), transactional leadership dimensions can be categorized into contingent rewards, management by exception (active) and management by exception (passive). Management by exception (active) is where leaders actively monitor the performance of followers to anticipate deviations or mistakes from predetermined standards before they become problems. Management by exception (passive) leadership, leaders intervene only when problem arise, standards are not met, and/or noncompliance occurs.
- Bass and Avolio (1993) posited negative feedback, punishment, and discipline to be the possible outcome of either management by exception (passive) or management by exception (active).

Transformational Leadership

- In transformational leadership, followers identify themselves with the leader, share the leader's vision of the future, and altruistically work hard to achieve determined goals.
- Transformational leadership believes in collective effort, and supportive workplace that leads to shared objectives, thereby emphasising group work as the best way to achieving organisational goals.
- Transformational leaders help followers to identify and develop their potentials as they encourage, support and inspire followers particularly through challenges.
- Transformational leaders inspire and encourage their followers to the extent that the followers see challenges as opportunities and the leaders cooperate and work with them to overcome these challenges at the workplace.
- These leaders recognise employees as knowledgeable who can intellectually contribute to solving some of organisations' problem. Hence, transformational leaders share a significant degree of decision-making power with their employees.
- Ahmed and Sadiq (2008) asserted that trust plays a substantial role in transformational leadership because of the mutual co-operation and reliance found between leaders and subordinates.
- Transformational leaders have vision and a sense of mission, instil pride in and among the group, gain respect and trust from followers, sacrifice their personal gains for the benefits of the group, set personal example for followers, and demonstrate high ethical standards (Bass, 1985; Humphreys & Einstein, 2003).
- According to Bass (1985), transformational leadership through intellectual stimulation provides followers with challenging new ideas and encourages them to view and handle problems from a fresh perspective. Such leaders do not accept things as they are; rather they challenge the status quo;
- Bass and Avolio (1994) stated that transformational leaders teach and help followers to develop their strengths, and listen attentively to the concerns of followers.

Social Exchange Theory

- **Social Exchange Theory**
- Success proposition: When one finds they are rewarded for their actions, they tend to repeat the action.
- Stimulus proposition: The more often a particular stimulus has resulted in a reward in the past, the more likely it is that a person will respond to it.
- Deprivation–satiation proposition: The more often in the recent past a person has received a particular reward, the less valuable any further unit of that reward becomes.

Summary

- ‘Stress’ is a symptom of emotional and biological arousal cased by
  - Genetic vulnerability to Anxiety-related disorders (GAD / Panic Disorder);
  - Genetic vulnerability to Depression-related illness (Typical & Atypical);
  - Direct exposure to trauma-causing experiences;
  - Frustration-related experiences (intrusions, external locus of control, facilities)
  - ‘Burnout’ & chronic fatigue (resulting in potential ‘Atypical’ Depression (DSMIV);
  - Chronic emotional dysregulation caused by frustration, external locus of control, invalidating experiences; inappropriate Transactional Leadership styles (extrinsic motivation), multiple-competing demands in life affecting self-worth,
  - Malingering, Primary & Secondary Gain processes (excusing poor performance or skill levels with medical-related factors (‘psychological excuses that offer escape & empathy)
- ‘Stress’ is something that everyone experiences, some are resilient and thrive on managing ‘stressors’ with vigour, others are emotionally vulnerable, become fatigued (Burnout)
- ‘Stress’ is exacerbated by invalidation and transactional leadership styles which may result in Counter-Productive Work Behaviours and ‘retributory’ actions (misrecognition syndrome. Particularly in the individual is experiencing ‘Burnout’ (*Oldenburg / Maslach Burnout Inventory)*
- The GP (Primary Care will commonly use PHQ-9 / GAD-7 and PHQ-SADS to screen for Anxiety / Depression related illness and the Somatisation (PHQ-15) will always be a feature of ‘Stress’; consequently the presenting employee will ALLWAYS achieve a medical ‘note’, whether it’s warranted or not.

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Summary

- It is important to see the 'needle in the haystack' and legitimise psychiatric illness (Major Depression, Anxiety and Panic-related illnesses, Bipolar Disorder, PTSD etc and it is helpful to know that the member of staff has Secondary Care referrals (CMHT);
- 'Reasonable Adjustments' as identified by the Equality Act will be required;
- Workplace-funded CBT is an effective treatment for the above (in conjunction with Pharmacotherapy) and time-off for recovery is important for staff vulnerable to mental disorder;
- 'Stress' is exacerbated by invalidation and transactional leadership styles which may result in Counter-Productive Work Behaviours and 'retributory' actions (misrecognition syndrome. Particularly in the individual is experiencing 'Burnout' (*Oldenburg / Maslach Burnout Inventory)*
- Understanding 'Conditional Beliefs' / 'Rules for Living psychology is helpful for HR and improves an ability to identify the potential causes of workplace 'Stress';
- It is important that organisations employ appropriate leadership styles that key into individual's 'Intrinsic Motivation' (Autonomy, Mastery & Purpose). This is achieved with 'Transformational Leadership' styles and validating practice (Dialectics);
- Malingering and Primary / Secondary Gain defences will always exist unfortunately;
- Identifying and managing the underlying causes of workplace 'Stress' remains the key!

Stress Psychology.

When feelings of anxiety, anger, depression (and fatigue) are low, a high level of resilience can be inferred. When these emotions are high, the subjective experience of stress may be present.

1) Anxiety / agitation and fear-related emotions are low. A sense of competency, control, and positive expectations

2) Anger-related (irritation, frustration, annoyance etc) are low as a result of frustration tolerance, good management or mindfulness skills

3) Depression-related emotion are low. feelings of energy, motivation, personal adequacy, and hopefulness

4) Anxiety, agitation, negative expectations of outcomes and underestimation of ability or resources to cope

5) Sense of anger (irritation, frustration, annoyance-related emotions).Frustration or threat or damage to some personally significant value

6) Depression is another natural reaction to threat, in which the damage to a personally significant value is attributed to perceived personal inadequacies

‘Burnout’ A Vicious Cycle?

(Maslach, Schaufel & Leiter 1993)

Emotional Exhaustion
Refers to the feelings of being emotionally drained, depleted and overextended.
Energy is lacking.

Exacerbated by
- High work workload / demand with low job control (responsibility without authority)
- Conditional self-worth cognitive processes

Depersonalisation / Cynasism
Refers to a sense of resentment or distant callous attitude towards one’s job, and the people connected to it. Weakened motivation - withdraws from a job that once sustained interest and motivation.

Exacerbated by
- Misrecognition, Invalidating responses from management?
- Transactional leadership styles / extrinsic motivation models of management

Reduced Emotional Accomplishment
Refers to feelings of inadequacy, incompetence, loss of self-esteem and ‘self’.

Exacerbated by
- High work workload / demand with low job control (responsibility without authority)
- Conditional self-worth cognitive processes
- Anxiety (Primary & Secondary appraisal errors)

‘Stressors’. Resulting in psychological and physiological ‘stress’ and maladaptive behaviours

1) General frustration and frustration arising from multiple-competing demands on social identity (home / work)

2) Resentment caused by responsibility without authority. High workload with expectations of goals set by others, exacerbated if self-worth is threatened in the process!

3) Invalidating experiences (views not validated by managers) resulting in perceived injustice and group divisions

4) Self worth conditional on work-related social identity without control of the nature, deadlines and outcomes of the workload

5) Primary appraisal errors (negative expectations of outcomes). Secondary appraisal errors (underestimating personal capacity to cope)

6) Maladaptive coping - longer working hours to maintain self-worth, manage deadlines (that the individual is contemptuous towards) thereby compounds a sense of frustration

‘Stressors’. Resulting in psychological and physiological ‘stress’ and maladaptive behaviours

7) Specific problems with equipment, facilities and / or the work environment (including Intrusions) manifesting in frustration-related stressors

8) Feeling unrewarded for contributions (misrecognition) and perceived lack of control manifesting in anger-related cognitions and potential CWB

9) Tendency to worry about a range of work / home related problems which are compounding Sympathetic arousal (sense of panic and extreme anxiety).

10) Depression-related cognitions, behaviours and physiology. (PHQ-9 melancholy, hopelessness, loss of pleasure, sleep disturbance, fatigue and perceived burdensomeness)

11) Burnout defined as emotional exhaustion, low energy and mood, depersonalisation and low motivation. Will present as ‘Atypical’ depression in primary care

12 Assertiveness problems exacerbated by invalidating environments. The desire to express concerns about leadership styles inhibited by anxiety (appraisal)

Physiological responses to acute and chronic stressors (including cognition-related stressors)

1) Increased Hear Rate and Blood Pressure can result in cardiovascular disease

2) Suppressed digestion can result in gastrointestinal disturbances

3) Increases in blood sugar levels. Extra blood sugar can result in metabolic changes

4) Catecholamine and glucocorticoids release which can disrupt serotonin and monoamine function which can impact on mental wellbeing

5) The body's immune system can be compromised. Inflammatory processes can reduce the body's ability fight off infections

6) Increased muscular tension, Headaches, back / shoulder pains

‘Homeostasis’. Management and recovery from a psychological, physiological and behavioural ‘stressed’ state with improved ‘adaptive’ coping, improved interpersonal skills and ‘personal CBT’

1) Awareness of frustration psychology managing unwanted intrusions and managing work / non-work boundaries with segmentation

2) Identifying the causes of ‘stress’ and developing an increased sense of control with appropriate assertiveness practice and interpersonal skills

3) Managers’ awareness of invalidation & locus of control psychology to minimise workplace group divisions & CWB

4) Cognitive reappraisals to amend ‘conditional belief’ cognitions and the associated behavioural problems associated with burnout and and atypical depression

5) Correcting primary and secondary appraisal errors. Identyfying appropriate coping resources and effectively communicatining anxieties in a validating environment

6) Appropriate recovery time including psychological detachment from work, relaxation, leisure time, exercise etc to counter the effects of burnout

Somatic symptoms of Autonomic Arousal

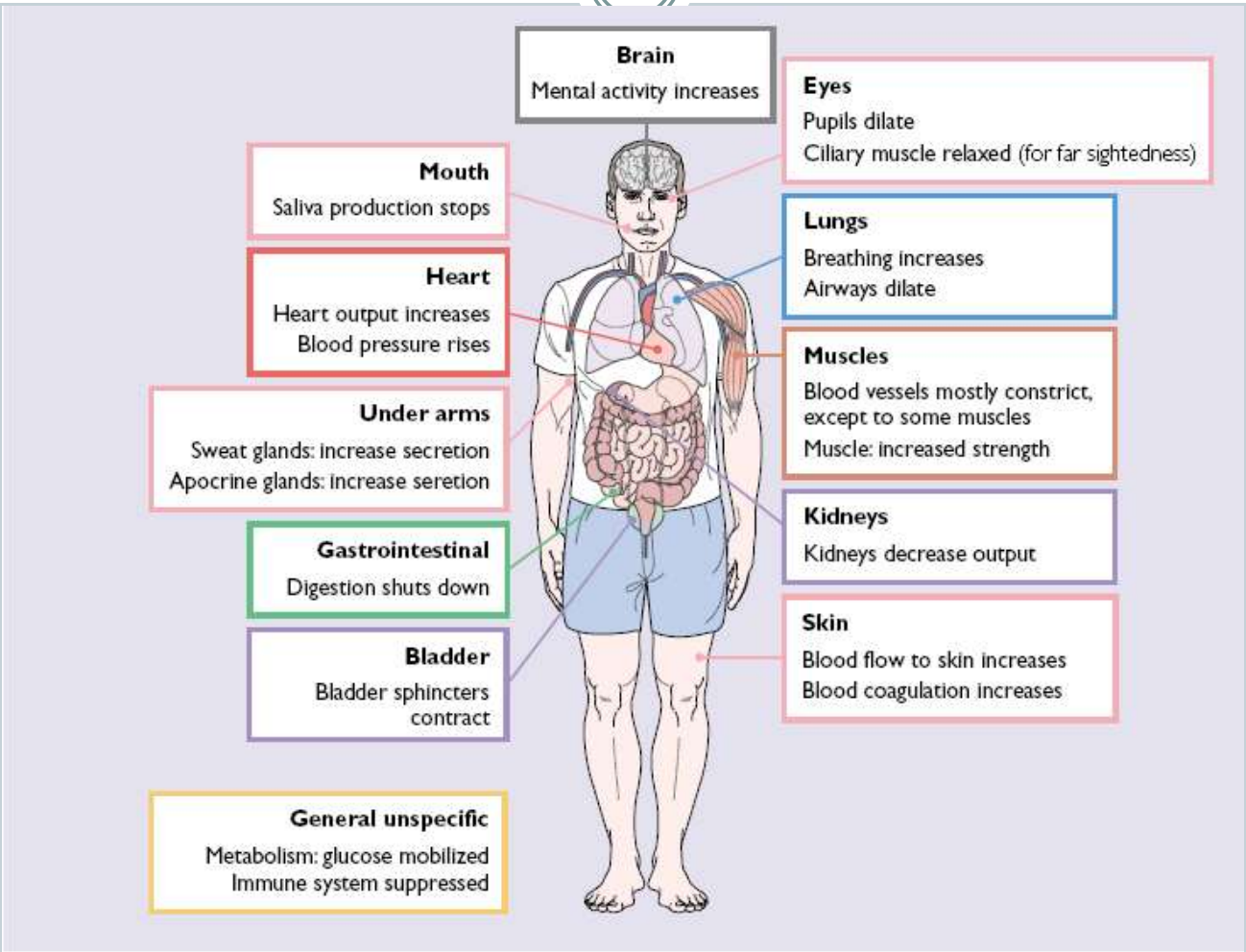

Figure 5.2 The physiologic response to 'flight or fight' stimuli

Primary /Secondary Gain

- **primary gain**
- a benefit, primarily relief from emotional conflict and freedom from anxiety, attained through the use of a defence mechanism or other psychological process (cognitive Dissonance).
- **secondary gain**
- interpersonal or social advantages (for example, assistance, attention, sympathy) gained indirectly from organic illness.
- an indirect benefit, usually obtained through an illness or debility. Such gains may include monetary and disability benefits, personal attention, or escape from unpleasant situations and responsibilities.
- **Malingering**
- is fabricating or exaggerating the symptoms of mental or physical disorders for a variety of "secondary gain" motives, which may include financial compensation)

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Understanding Stress

Atypical Depression

- **Atypical depression**, or **depression with atypical features** as it has been known in the DSM IV, is depression that shares many of the typical symptoms of the psychiatric syndromes major depression or dysthymia but is characterised by improved mood in response to positive events.
- In contrast, people with melancholic depression generally do not experience an improved mood in response to normally pleasurable events.
- Atypical depression also features significant weight gain or an increased appetite, hypersomnia, a heavy sensation in the limbs and interpersonal rejection sensitivity that results in significant social or occupational impairment.

The DSM-IV-TR defines Atypical Depression as a subtype of Major Depressive Disorder with Atypical Features, characterised by:

- Mood reactivity (i.e., mood brightens in response to actual or potential positive events)
- At least two of the following:
  - Significant weight gain or increase in appetite;
  - Hypersomnia (sleeping too much, as opposed to the insomnia present in melancholic depression);
  - Leaden paralysis (i.e., heavy, leaden feelings in arms or legs);
  - Long-standing pattern of interpersonal rejection sensitivity (not limited to episodes of mood disturbance) that results in significant social or occupational impairment.

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Understanding Stress

Burnout & Depression

- Burnout is usually regarded as a work-related chronic stress syndrome combining emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Enzmann, 1998).

- Emotional exhaustion refers to the feelings of being emotionally drained and overextended. Energy is lacking and low mood prevails.

- Depersonalisation characterises a distant and callous attitude toward one's job and the people connected to it (e.g., students, patients, clients). The worker shows weakened motivation and withdraws from an occupation that once sustained a great deal more interest for him or her.

- Lastly, reduced personal accomplishment includes feelings of inadequacy and incompetence associated with loss of self-confidence.

- Depression is primarily defined by two core symptoms: anhedonia (i.e., markedly diminished interest or pleasure in most activities) and depressed mood (American Psychiatric Association [APA], 1994; Sapolsky, 2004). Stress plays a central role in the aetiology of depression as in the aetiology of burnout (Sapolsky, 2004; Tennant, 2001). The sustained impossibility of controlling one's environment and actively neutralizing stressors is a key etiological factor in many theories of depression (Gilbert, 2006; C. Peterson, Maier, & Seligman, 1993).

Understanding Stress

Oldenburg Burnout Inventory

Totally Disagree Disagree Agree Totally Agree (Scores 1 2 3 4)

Exhaustion

O2. There are days when I feel tired before I arrive at work
O4. After work, I tend to need more time than in the past in order to relax and feel better
O5. I can tolerate the pressure of my work very well
O8. During my work, I often feel emotionally drained
O10. After working, I have enough energy for my leisure activities
O16. When I work, I usually feel energized
O12. After my work, I usually feel worn out and weary
O14. Usually, I can manage the amount of my work well

Disengagement

O1. I always find new and interesting aspects in my work
O3. It happens more and more often that I talk about my work in a negative way
O6. Lately, I tend to think less at work and do my job almost mechanically
O7. I find my work to be a positive challenge
O9. Over time, one can become disconnected from this type of work
O13. This is only type of work that I can imagine myself doing
O15. I feel more and more engaged in my work
O11. Sometimes I feel sickened by my work tasks

Understanding Stress

Maslach Burnout Inventory

Everyday A few times a week Once a week A few times a month Once a month or less A few times a year Never

I feel emotionally drained from my work.
I feel used up at the end of the workday.
I feel fatigued when I get up in the morning and have to face another day on the job.
I feel I treat some people as if they were impersonal objects.
Working with people all day is really a strain for me.
I deal very effectively with the problems of my colleagues and customers.
I feel burned out from my work.
I feel I'm positively influencing other people's lives through my work.
I've become more callous toward people since I took this job.
I worry that this job is hardening me emotionally.
I feel very energetic.
I feel frustrated by my job.
I feel I'm working too hard on my job.
I don't really care what happens to some colleagues
Working with people directly puts too much stress on me.
I can easily create a relaxed atmosphere with my colleagues
I feel exhilarated after working closely with my colleagues
I have accomplished many worthwhile things in this job.
I feel like I'm at the end of my rope.
In my work, I deal with emotional problems very calmly.
I feel managers blame me for some of their problems.

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Understanding Stress

Work & Non-work boundaries

Boundaries between work and non-work are often blurred (Ashforth, Kreiner, & Fugate, 2000; Duxbury, Higgins, Smart, & Stevenson, 2014).

Not being able to separate work from other important parts of life and being constantly accessible reduces time for rest and recovery (Lundberg & Cooper, 2011).

Recovery—described as a process opposite to the strain process (Meijman & Mulder, 1998)—is important for reducing the negative effects of stressful working conditions (Geurts & Sonnentag, 2006).

Recovery allows individuals to replenish their resources and return to their pre-stressor level after a stressful experience (Meijman & Mulder, 1998).

A growing body of research demonstrates that recovery during off-job time promotes employees' well-being, health, and job performance (e.g., Binnewies, Sonnentag, & Mojza, 2010; Kinnunen,

Understanding Stress

Work & Non-work boundaries

Cross-role interruption behaviors refer to the degree to which individuals allow incursions from one role to another (Ashforth et al., 2000; Kossek et al., 2012).

The authors hypothesise four profiles,
1) Work Guardians, (Work Guardians have high interruption behaviours from work to non-work, but not vice versa);
2) Non-work Guardians, (Non-work Guardians have high interruption behaviours from non-work to work, but not vice versa);
3) Integrators have high cross-role interruption behaviours between work and non-work domains in both directions;
4) Separators have low cross-role interruption behaviours between work and non-work domains in both directions;

Understanding Stress

Work & Non-work boundaries

Boundary management refers to the ways in which employees create, maintain, and negotiate boundaries between work and non-work (Ashforth et al., 2000; Bulger, Matthews, & Hoffman, 2007). Boundaries (e.g., physical, time or psychological) define entities as separate from one another and serve to structure the various roles of individuals in different life domains. Not being able to separate work from other important parts of life and being constantly accessible reduces time for rest and recovery (Lundberg & Cooper, 2011). , health, and job performance (e.g., Binnewies, Sonnentag, & Mojza, 2010; Kinnunen,

Recovery experiences proposed by Sonnentag and Fritz (2007). leisure activities (e.g., going for a walk, watching TV) offer recovery potential by enabling specific experiences:

- psychological detachment from work,
- relaxation,
- mastery experiences, and control.

Psychological detachment implies disengaging mentally from work during off-job time. Relaxation is a state characterized by low (sympathetic) activation and increased positive affect. Mastery experiences refer recovery from work stress occurs when an individual is no longer confronted with work demands.

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Understanding Stress

Work & Non-work boundaries

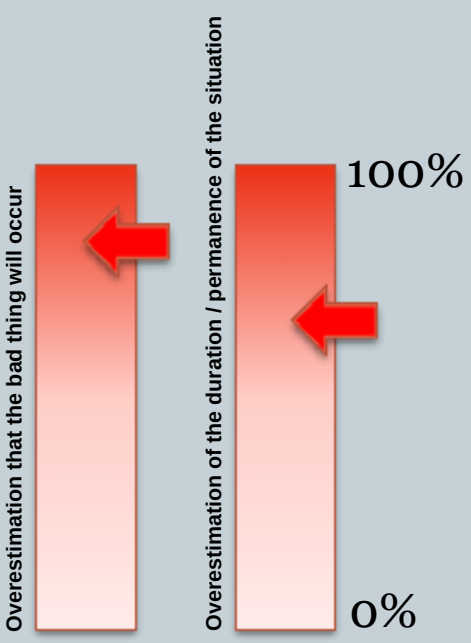
Separation may be conducive especially to psychological detachment, relaxation, and control during off-job time. This occurs because individuals who separate their work and non-work roles create impermeable boundaries around their life domains, which may prevent the intrusion of thoughts and actions from work into private life. Therefore these individuals are able to psychologically detach from their work, relax during off-job time and have better control over their non-work time. Three recent studies suggest that actively separating work and non-work life domains is conducive to psychological detachment from work (Derks et al., 2014; Hahn & Dormann, 2013; Park et al., 2011).

Separators and Non-work Guardians, both of whom do not accept interrupting behaviours from work to non-work, have the highest levels of psychological detachment from work, relaxation , and control and mastery experiences during non-work time.

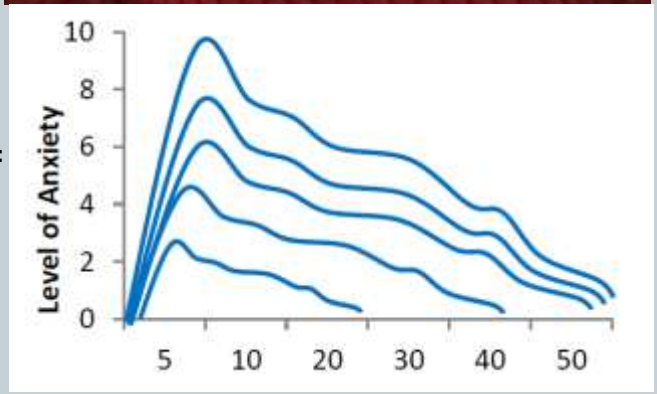
Integrators and Work Guardians, who accept interrupting behaviours from work to non-work, have, conversely, the lowest levels of psychological detachment, relaxation, and control during non-work time

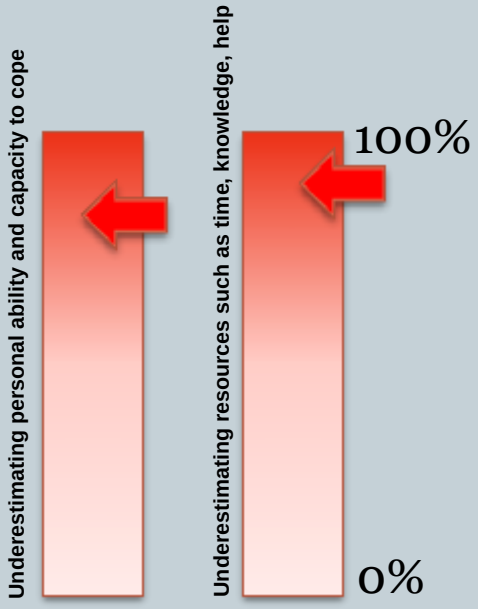
Anxiety-related cognitions

- **Alarm System and Adaption Processes**



Primary Appraisal errors (negative expectations):

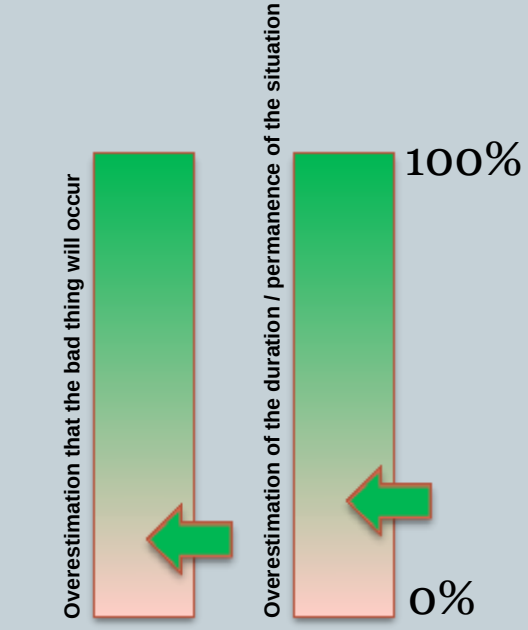




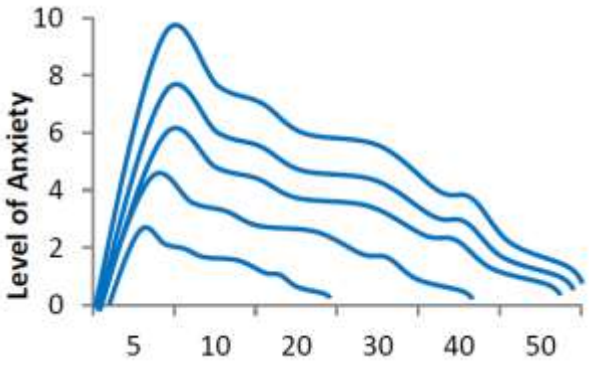
Secondary Appraisal errors (feelings related to dealing with the stressor, or the stress it produces)

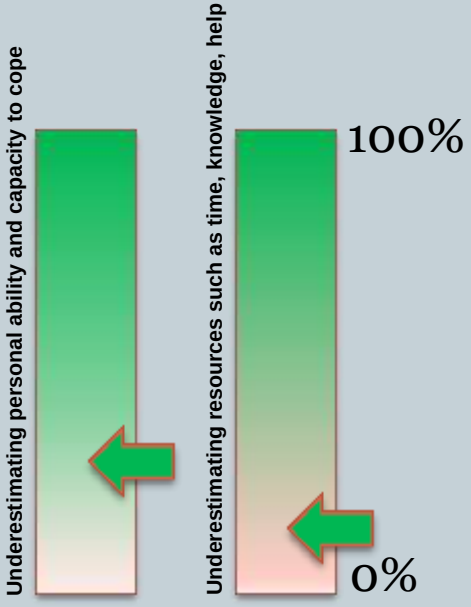
Anxiety-related cognitions

- **Alarm System and Adaption Processes**



Primary Appraisal errors (negative expectations):





Secondary Appraisal errors (feelings related to dealing with the stressor, or the stress it produces)

Self Psychology

- **The 'Self', and the 'Self Guides'**
- The concept of self discrepancy theory explains the ultimate source of anxiety and dejection (Higgins, 1987). The basic premise is that individuals experience anxiety when they feel they have not fulfilled their duties and obligations, but experience dejection when they feel they have not fulfilled their hopes and aspirations.
- Metacognitive experience is responsible for **creating an identity that matters to an individual.** The creation of the identity with metacognitive experience is linked to the **identity-based motivation (Declarative knowledge) .**

- Is this action / behaviour part of my identity or **'part of the 'self' and so worth pursuing? Or should be abandoned?**

- **Here is an example:** a woman who loves to play clarinet has come upon a hard piece of music. She knows that how much effort she puts into learning this piece is beneficial. The piece had difficulty so she knew the effort was needed. **The identity the woman wants to pursue is to be a good clarinet player.**

Self Discrepancy Theory

Higgins, E.T., Roney, C.J.R., Crowe, E., Hymes C. (1994). Ideal versus ought predilections for approach and avoidance: Distinct self-regulatory systems, Journal of Personality and Social Psychology, 66, 276-286.

Own

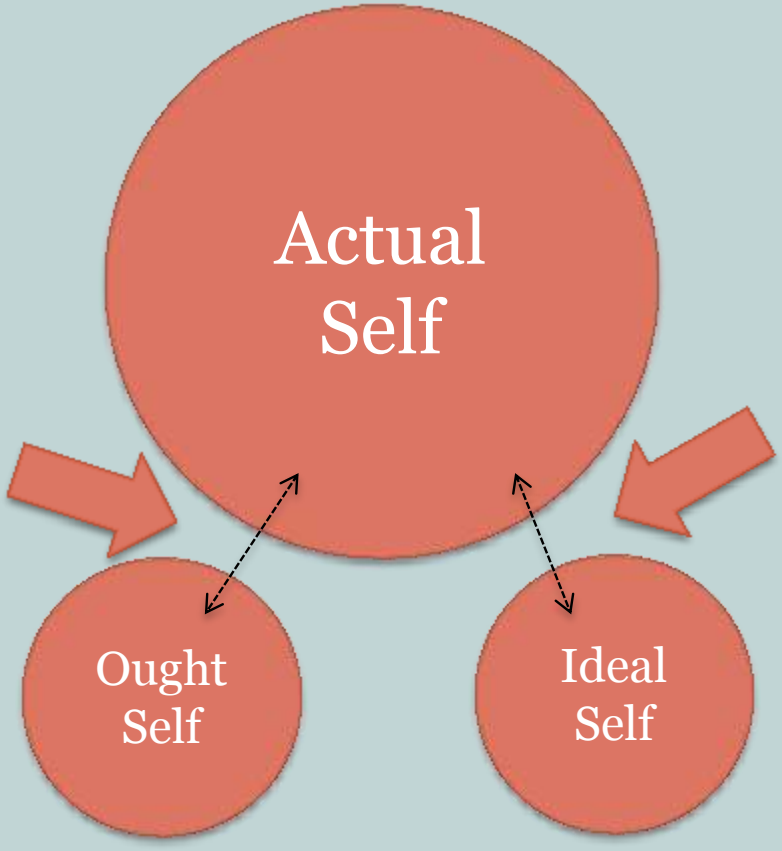
A discrepancy between these self-guides occurs when one's view of their actual attributes do not meet the expectations of what they think they ought to possess or believe they have transgressed a personally legitimate and accepted moral standard

- Self-dissatisfaction
- Vulnerable to guilt,
- self-contempt
- Uneasiness
- Feelings of moral worthlessness or weakness

Other

This discrepancy exists when a person's own standpoint does not match what they believe a significant other considers to be his or her duty or obligation to attain. Agitation-related emotions are associated with this discrepancy

- Violation of prescribed duties and obligations is associated with punishment
- The person is predicted to be vulnerable to fear and feeling threatened
- anxiety and apprehension over perceived negative responses from others
- May also might experience feelings of resentment (arises from the anticipated pain to be inflicted by others)



Own

An individual's *own* personal standpoint. This discrepancy is uniquely associated with depression

- Disappointment and dissatisfaction
- personal wishes have been unfulfilled
- Dejection from perceived lack of effectiveness or self-fulfilment
- Frustrated
- Emotions such as blameworthiness, feeling no interest in things, and not feeling effective

Other

The standpoint of some *significant other* (Here, one's view of our actual attributes do not match the ideal attributes the significant other hopes or wishes for them. This discrepancy is associated with dejection from perceived or anticipated loss of social affection or esteem

- Shame
- Embarrassment
- Shame - believing that they have lost standing or esteem in the eyes of others.

Steps to misidentification, disengagement & 'disidentification'

1) Identifies with a social group & and has aspirations to belong & sees the self as capable **(Declarative knowledge)** ;
2) Distorted cognitions:
    1) Vulnerable to developing a sense of injustice / feeling overlooked or rejected (as a consequence of organisational change;
    2) The sense of injustice and perceived rejection results in a sense of 'misrecognition', disengagement and sometimes 'subversive' behaviour.

Self Psychology

- **The 'Self' & Perceived evaluation of others - Sociomotor Theory**

  (Baumeister, Leary. 1997)
- People's thoughts and feelings about themselves reflect how they believe they are evaluated by others
- Others' reactions exert a strong effect on self esteem because the self esteem system is itself is a subjective monitor or gauge to the degree to which the individual is being included and accepted verses excluded rejected by other people
- This system monitors the social environment (often at a non-conscious or preattentive level) for cues connoting exclusion, rejection and ostracism and alerts the individual by means of negative affect (experienced as a lowered state of self esteem) when cues are detected
- (The psychology of Projection & Projective Identification should be consider)

Self Psychology

- **Social Group Identity and responses to stress** (Haslam, Reicher. 2006)
- People tend to see world from the perspective of fellow in-group members. They are more likely to be influenced by in-group members and more likely to trust & cooperate with in-group members rather than out-group members
- Stressors are seen as more threatening when an individual's social identity (in this case, in-group peer-support workers is salient)
- Shared social identity and social support helps buffer stress
- Social identification within a group has a positive influence on an individual's long-term health

Psychology - OCPD

OCPD - A pervasive pattern of preoccupation with orderliness, perfectionism, and mental and interpersonal control, at the expense of flexibility, openness, and efficiency"

Cognitive Biases

- Dichotomous (all-or-nothing / black and white) thinking
- Conditional Beliefs (Shoulds and musts)
- Selective attention (noticing the negative; discounting the positive)
- Overgeneralisation

Psychology - Perfectionism

Perfectionism (Frost Multidimensional Perfectionism Scale)

Concern over Mistakes

If I fail at work, I am a failure as a person.
I hate being less than best at things.

Personal Standards

I set higher goals than most people.
I am very good at focusing my efforts on attaining a goal.

Doubts about Actions

I usually have doubts about the simple everyday things I do.
It takes me a long time to do something right.

Hewitt and Flett Multidimensional Perfectionism Scale

Self-Oriented Perfectionism

When I am working on something, I cannot relax until it is perfect.
I demand nothing less than perfection of myself.

Other-Oriented Perfectionism

I seldom criticize my friends for accepting second best.
The people who matter to me should never let me down.

Socially Prescribed Perfectionism

Those around me readily accept that I can make mistakes too.
My family expects me to be perfect.

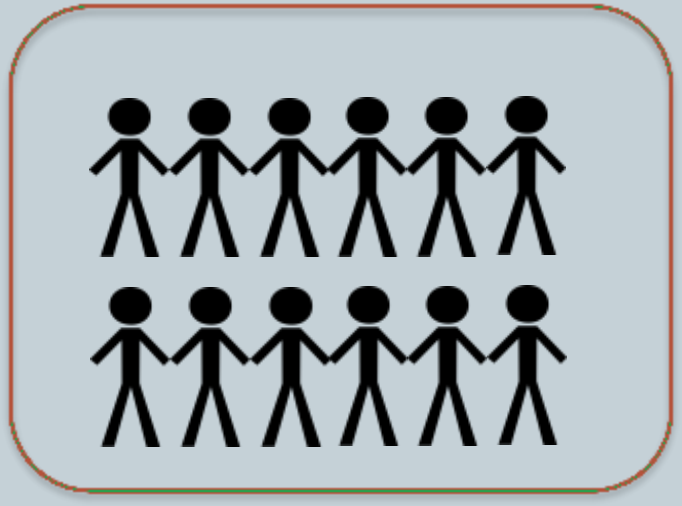
Self Psychology

- **Perceptions of fairness, Resentment & Counter-productive work behaviours (CWB):**

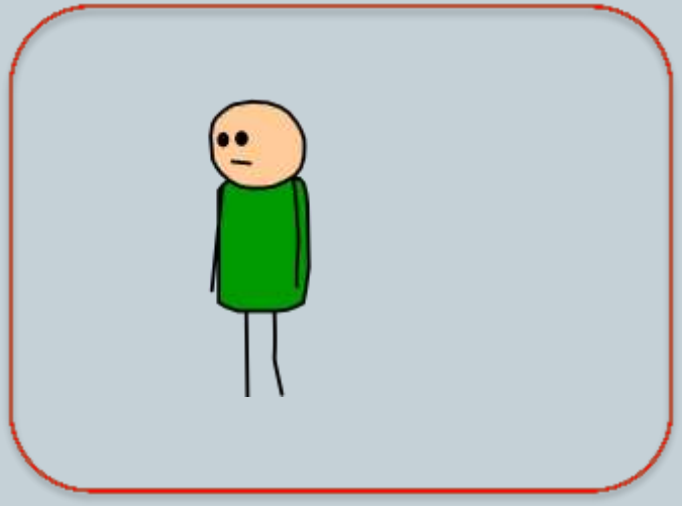
- Counterproductive Work Behaviour (CWB) is a cognition-based response to experienced injustice and should be considered within the framework of job stress theory.
- Distributive justice relates to an individual's perceptions of the fairness of the outcomes they receive relative to their contributions.
- Procedural justice involves people's perceptions of the fairness of procedures used to determine those distributions.
- Employees may respond to perceptions of unfair treatment (Distributive & Procedural Justice evaluations) with negative emotions, such as anger and resentment.
- Perceptions of injustice are linked to negative emotions and associated cognitions. CWB can include overt acts such as aggression and theft, passive acts, such as purposely failing to follow instructions or doing work incorrectly and can manifest in retributory impulses and behaviours. Naturally, these behaviours are harmful to the organisation by directly affecting its functioning in a way that will reduce their effectiveness.

Self Psychology

- **Group Dynamics & Social Identity Theory.** In the Social Identity Theory, a person has not one, "personal self", but rather several selves that correspond to widening circles of group membership. Social identity is the individual's self-concept derived from perceived membership of social groups. *Identification – the bonds of fellowship, shared cause , ambition and the effects on self narrative*
- (Tajfel & Turner et al 1979, Hogg & Vaughan. 2002.



Group A (Aspirations to belong)



Group B Aspirations to belong, 'misrecognition', disengagement, 'disidentification'. (feels that the claim to the 'x' identity in group 'A' as been publically rebuffed and shunned in a humiliating way.)

- Integrated social identity model of stress that addresses intragroup and intergroup dynamics of the stress process.

Identifying underlying causes?

- 1. ‘If I don’t excel at my tasks then I feel bad about myself’
- 2. There are specific problems with equipment, the facilities and / or the work environment that are frustrating me’
- 3. ‘There are multiple competing demands in my life which are stressing me. Pressures at work and pressures at home – I find it difficult to balance the two’ (please select a / b, or both)
- - ‘It’s frustrating’
- - and / or ‘I’m letting people down as a consequence’
- 4. ‘There’s a lot to do and I don’t like to come back to unfinished work the following day’
- 5. ‘Sometimes, the rules and established procedures annoy me. People don’t listen to my views and ideas’
- 6. ‘I am particularly anxious / worried about a particular feature of this job. It stresses me out quite a lot’
- 7. ‘I sometimes feel anxious, agitated and panicky, as if something awful might happen’
- 8. ‘I find it difficult to meet others’ expectations of me’
- 9. ‘I am reluctance to delegate tasks to others’
- 10. ‘I worry that people will see my weaknesses unless my work is perfect’
- 11. ‘I feel emotionally drained from my work and that my efforts are largely unrecognised’
- 12. ‘There is a lack of support in this job. There is constant pressure on deadlines which are difficult to meet. People often delegate their problems and don’t give us enough time or help’
- 13. ‘I often don’t feel rewarded for a job well done’
- 14. ‘If I fail at work, I am a failure as a person. I hate being less than the best at things’
- 15. ‘I feel nervous, anxious, on edge / and / or panic lot of the time. I struggle to stop or control worrying’
- 16. ‘I am very good at focusing my efforts on attaining a goal but can’t relax until it’s finished’

Identifying underlying causes?

- 17. ‘I get very frustrated when things get in my way. There’s so many interruptions, I can never get anything done’
- 18. ‘I need to have more control over the deadlines of projects at work. It’s unfair when people set tight deadlines and leave me with the stress’
- 19. ‘I sometimes feel panicky. My heart beats quickly, I have sweaty palms or feel I need to escape’
- 20. ‘I am overly concerned with things being in order. Sometimes the trivial details delay or interfere with completing tasks on time or properly’
- 21. ‘I feel like I’m letting people down, I’m a burden to people’
- 22. ‘It annoys me when people don’t listen to my point of view, or understand how I feel’
- 23. ‘I feel very tired and unmotivated recently. Quite cynical about work, customers and / colleagues’
- 24. ‘I don’t feel that the company is fair to me considering my contributions’
- 25. ‘I worry about (or have difficulty), expressing my point of view when people stress me or annoy me’
- 26. ‘My determination to excel is sometimes at the expense of home life, leisure and friendships’
- 27. ‘I don’t think I have the ability to cope with aspects of the job’
- 28. ‘There seems to be group divisions in this company, particularly between management and staff. Management don’t seem to recognise our efforts’
- 29. ‘Lately, I tend to think less at work and do my job almost mechanically’
- 30. ‘I need more responsibility to take decisions and to fulfil work or projects by myself’
- 31. ‘Some people can be extremely rude, particularly over deadlines or the standard of my work’
- 32. ‘I feel that there’s a poor’ leadership style in this company. There is a general absence of contact which leaves me second guessing all the time’.
- 33. ‘I don’t think I’ve had sufficient training to do the job properly’
- 34 ‘I have particular difficulties at home / in my personal life which are causing me stress’

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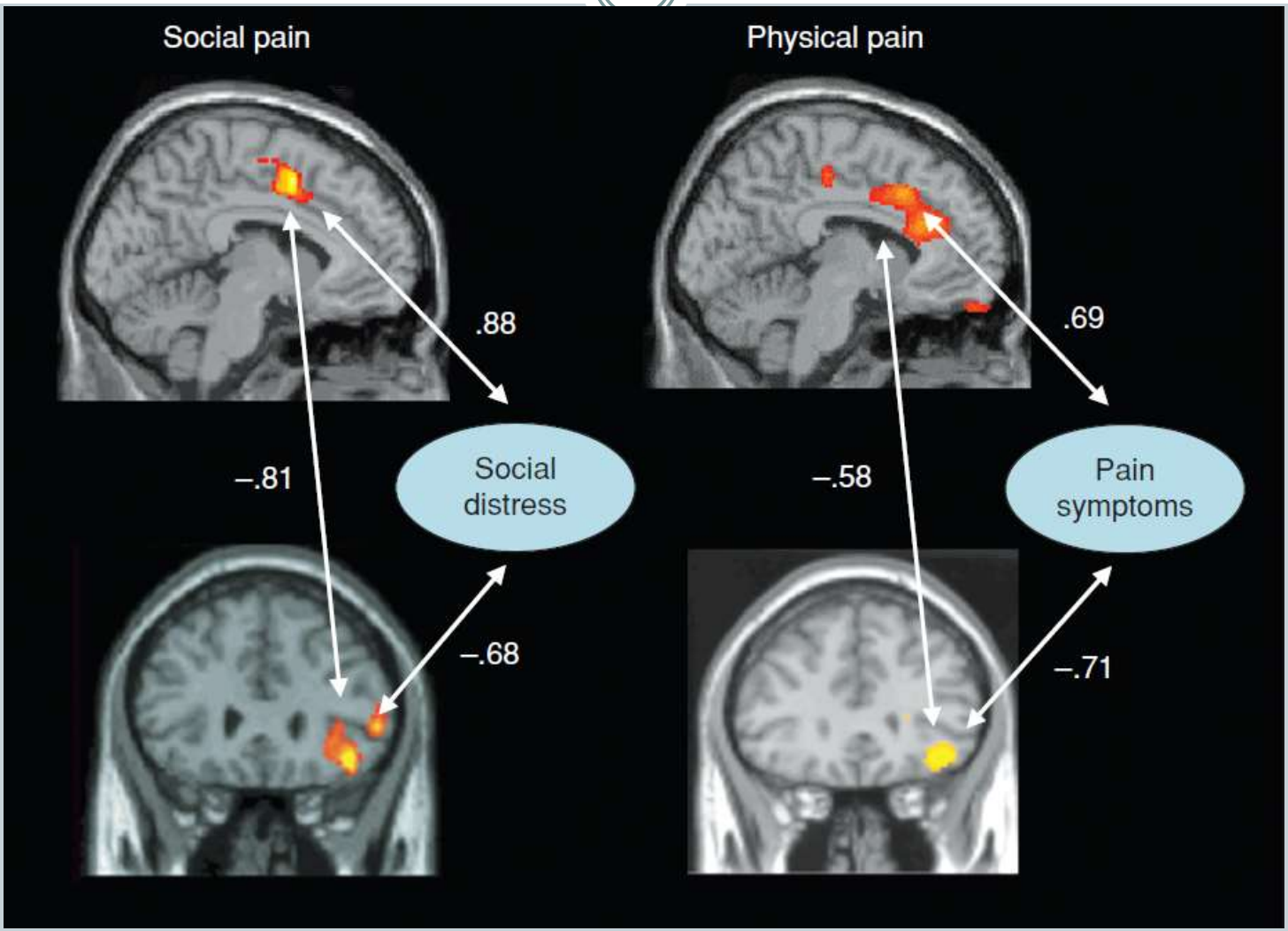
Does rejection hurt?



Does rejection hurt?

Social Cognitive and Affective Neuroscience Advance Access published December 18, 2013

doi:10.1093/scan/nst178 SCAN (2013) 1 of 9

Cerebral processing of social rejection in patients with borderline personality disorder

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An intense fear of abandonment or rejection is a central feature of social relationships for individuals with borderline personality disorder (BPD). A total of 20 unmedicated BPD patients and 20 healthy participants (HC), matched for age and education, played a virtual ball-tossing game including the three conditions: exclusion, inclusion and a control condition with predefined game rules, whereas cerebral activity was assessed using functional magnetic resonance imaging. Subjective experiences of exclusion were assessed after each blocked condition. Both groups felt similarly excluded during the exclusion condition; however, BPD subjects felt more excluded than HC during the inclusion and control conditions. In all three conditions, BPD patients showed a stronger engagement of the dorsal anterior cingulate and medial prefrontal cortex. For HC, activation in several cerebral regions such as the insula and the pons was different depending on the interactive situation, whereas for BPD subjects activation in these regions was not modulated by experimental conditions. Subjects with BPD differed from HC in both their subjective reactions to and their neural processing of social interactive situations. Our data support that individuals with BPD have difficulty in discriminating between social situations, and tend to overinterpret during social encounters that are not determined by the intentions of others.

Keywords: borderline personality disorder; social exclusion; social interaction; cerebellum; hypermentalizing

INTRODUCTION

Borderline personality disorder (BPD) is a severe psychiatric disorder affecting about 5% of the adult population (Trull *et al.*, 2010). Core features of BPD are affective dysregulation, identity disturbances and problems in social interaction (Lieb *et al.*, 2004), with an intense fear of loss, abandonment, or rejection by social partners (Diagnostic and Statistical Manual of Mental Disorders (DSM-V), APA, 2013). Clinical experience suggests that social rejection and solitude can trigger states of aversive tension in individuals with BPD, and that these conditions often precede self-injurious behaviors (Herpertz, 1995; Selglowitz *et al.*, 2005).

Staebler *et al.* (2011a) found that BPD patients scored higher than either healthy controls or patients with anxiety disorders, including social phobia or mood disorders, on questionnaire measuring rejection sensitivity (Downey and Feldman, 1996). Compared with either of the other groups, they reported a greater tendency to both expect and perceive rejection in social situations and to react more strongly to these experiences. These findings were confirmed in a study employing the 'Cyberball' game in which the experience of social rejection is induced under experimental conditions (Staebler *et al.*, 2011b). In this paradigm, participants engage in an online ball tossing game with partners who they believe to be co-participants, but in fact are pre-programmed virtual players. In the 'inclusion' condition, all players receive the same number of ball tosses, whereas in the 'exclusion' condition the co-players stop tossing the ball to the subject, thereby excluding him from the game. BPD patients felt more excluded than did healthy controls (HC) independent of the experimental condition, i.e. they felt more rejected even when they were being equally included.

Only one study, using a small sample (10 BPD patients), has directly examined cerebral correlates of social inclusion and exclusion in BPD (Ruocco *et al.*, 2010). In this study BPD patients played a card game with virtual partners while undergoing functional neuroimaging procedures. The card game was adapted from the 'Cyberball paradigm. Findings showed altered processing in the frontolimbic neurocircuitry during social rejection. Specifically, activity in the medial prefrontal cortex (mPFC) was increased and was correlated with general rejection and abandonment fears.

In contrast, numerous studies have investigated the cerebral processing of social rejection in healthy individuals. Several of these found enhanced activation during social rejection in the dorsal anterior cingulate cortex (dACC) that partly correlates with an enhanced subjective experience of social exclusion (Eisenberger *et al.*, 2003; Kross *et al.*, 2007, 2011; Kawamoto *et al.*, 2012). Eisenberger and Lieberman (2004) suggested that activity within this region is linked to the activation of a 'neural alarm system' relevant for the detection of social exclusion through conflict monitoring. The ventral anterior cingulate cortex (vACC) and the insula have been identified as two other cerebral structures that are essential for the processing of social exclusion. Following the seminal model of emotion regulation (Ochsner and Gross, 2005), an enhanced activation of these structures has been linked to the affective value of the experience of social exclusion (Eisenberger *et al.*, 2003; Somerville *et al.*, 2006; Onoda *et al.*, 2009; Bolling *et al.*, 2011; Kross *et al.*, 2011; Moor *et al.*, 2012). A positive correlation of insula and vACC activation with subjective experience of exclusion supports this idea (Kross *et al.*, 2007; Onoda *et al.*, 2009; Way *et al.*, 2009; Moor *et al.*, 2012). Increased activation during exclusion has also been observed in brain areas, such as the mPFC, the posterior cingulate cortex (PCC) and the precuneus (Kross *et al.*, 2007; Onoda *et al.*, 2009; Bolling *et al.*, 2011; DeWall *et al.*, 2012; Kawamoto *et al.*, 2012). These regions have been linked to self-referential processes, to mentalizing, to evaluation of responses to negative affective stimuli and to episodic memory retrieval (Ochsner *et al.*, 2004;

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*These authors contributed equally to this work.

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Does rejection hurt?

Molecular Psychiatry (2013) 18, 1211–1217

www.nature.com/mp

ORIGINAL ARTICLE

Response of the μ-opioid system to social rejection and acceptance

DT Hsu[1], BJ Sanford[1], KK Meyers[1], TM Love[1], KE Hazlett[2], H Wang[1], L Ni[1], SJ Walker[3], BJ Mickey[1], ST Koeppe[4], FA Koeppe[4], JK Crocker[4], SA Langenecker[1] and JK Zubieta[1,4]

The endogenous opioid system, which alleviates physical pain, is also known to regulate social distress and reward in animal models. To test this hypothesis in humans (n = 18), we used an μ-opioid receptor (MOR) radiotracer to measure changes in MOR availability in vivo with positron emission tomography during social rejection (not being liked by others) and acceptance (being liked by others). Social rejection significantly activated the MOR system (i.e., reduced receptor availability relative to baseline) in the ventral striatum, amygdala, midline thalamus and periaqueductal gray (PAG). This pattern of activation is consistent with the hypothesis that the endogenous opioids have a role in reducing the experience of social pain. Greater trait resiliency was positively correlated with MOR activation during rejection in the amygdala, PAG and subgenual anterior cingulate cortex (sgACC), suggesting that MOR activation in these areas is protective or adaptive. In addition, MOR activation in the pregenual ACC was correlated with reduced negative affect during rejection. In contrast, social acceptance resulted in MOR activation in the amygdala and anterior insula, and MOR deactivation in the midline thalamus and sgACC. In the left ventral striatum, MOR activation during acceptance predicted a greater desire for social interaction, suggesting a role for the MOR system in social reward. The ventral striatum, amygdala, midline thalamus, PAG, anterior insula and ACC are rich in MORs and comprise a pathway by which social cues may influence mood and motivation. MOR regulation of this pathway may preserve and promote emotional well being in the social environment.

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Keywords: acceptance; mu; opioid; PET; rejection; social

INTRODUCTION

Humans rely on acceptance into groups and intimate relationships for survival and emotional well being. Threats to the need, such as social rejection (i.e., being excluded or not liked by others), can cause social withdrawal, irritability, substance abuse and symptoms of anxiety and depression.[1–4] Research over the past decade has shown that social rejection and physical pain share similar neuronal pathways, leading to the theory of 'social pain'.[5–8] This theory suggests that responses to social rejection are regulated by endogenous opioids and the μ-opioid receptor (MOR), which alleviate physical pain, and is also known to regulate social distress in several non-human species.[9–14]

A few studies suggest a role for the endogenous opioid system in ameliorating the effects of social rejection in humans. A central analgesic response from functional magnetic resonance imaging (fMRI) blood-oxygenation-level-dependent (BOLD) responses to social rejection,[15] and variations in the MOR gene were associated with BOLD sensitivity to social rejection.[16] However, regional changes in the MOR system in humans that may serve to reduce the experience of social rejection are not known. The MOR system also has an important role in social reward in animal models;[9,10] however, it is not known if the MOR system has a similar role in humans. To examine regional changes in the MOR system during social rejection and acceptance, we measured changes in MOR availability in vivo using [11C]carfentanil, a ligand with high and selective affinity for MORs,[17] with positron emission tomography (PET).

MATERIALS AND METHODS

Subjects

Participants were 18 healthy volunteers aged 18–48 years (11 female; 7 male; mean age ± s.d., 32 ± 12 years) screened for absence of medical illness and psychiatric disorders using the SCID IV (Structured Clinical Interview for DSM IV Axis I Disorders non-patient version, NO SUBJECTS ARE TAKING psychotropic medications, hormones or hormonal contraception in the 3 months before study. Phase of menstrual cycle was not controlled for given that MOR binding potential (BP$_{ND}$) in vivo is not influenced by phase in the menstrual cycle.[12] Study protocols were approved by the Institutional Review Board of the University of Michigan Medical School, and written informed consent was obtained.

Social landmark task

Several days before scanning, subjects completed an online personal profile that included age, religious affiliation, a list of their interests, a short paragraph of their positive qualities and a picture of themselves. Scores for the Ten Item Resiliency[18] were also reviewed at this time. Subjects selected at least 40 online profiles of preferred sex individuals with whom they would be most interested in forming an intimate relationship, from a collection of 750 profiles of men and women. For each profile, subjects answered two questions ('Would I like this person?' and 'Do I think this person would like me?') on a seven-point Likert scale from 'definitely no' to 'definitely yes'. To increase feedback efficacy, only profiles with the highest ratings for both questions were used. These procedures were chosen based on an fMRI study[19] and another showing that social feedback from highly rated opposite sex individuals (compliant with heterosexual norms) and same sex individuals results in the greatest changes in brain activation.[20] Seventeen subjects identified themselves as heterosexual and rated only opposite sex profiles

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Does rejection hurt?

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The pain of social disconnection: examining the shared neural underpinnings of physical and social pain

Naomi I. Eisenberger

Abstract | Experiences of social rejection, exclusion or loss are generally considered to be some of the most 'painful' experiences that we endure. Indeed, many of us go to great lengths to avoid situations that may engender these experiences (such as public speaking). Why is it that these negative social experiences have such a profound effect on our emotional well-being? Emerging evidence suggests that experiences of social pain — the painful feelings associated with social disconnection — rely on some of the same neurobiological substrates that underlie experiences of physical pain. Understanding the ways in which physical and social pain overlap may provide new insights into the surprising relationship between these two types of experiences.

"...a sense of separation is a condition that makes being a mammal unhappy." Paul MacLean

Some of the most distressing experiences that we face involve the dissolution of our closest social bonds. Indeed, it is difficult to imagine a situation more upsetting than a relationship break-up or the more devastating than the loss of a loved one. In fact, according to one study, nearly three out of four people listed the loss of a close relationship (for example, through death or a relationship break-up) as the "single most negative emotional event" of their lives[1]. Interestingly, some individuals have gone so far as to describe these experiences of social loss or social separation as being "painful". Given the intense emotional consequences of broken social bonds, one may ask why we react so strongly to the loss of our social ties.

Research over the past century, from social psychology to behavioural neuroscience, has demonstrated the importance of social bonds for mammalian well-being and survival[2–5]. Early in life, many mammalian infants are completely dependent on caregivers, relying on them exclusively for nourishment, care and protection[6]. Later on, connections to a social group aid survival through the shared responsibility for food acquisition, predator protection and care for offspring[7]. Owing to this profound reliance on others, threats to social connection may be just as detrimental to survival as threats to bodily physical safety and thus may be processed by some of the same underlying neural circuitry. Specifically, it has been proposed[8–10] that experiences of 'social pain' — which is defined as the unpleasant experience that is associated with actual or potential damage to one's sense of social connection or social value (owing to social rejection, exclusion, negative social evaluation or loss) — may be processed by some of the same neural circuitry that processes physical pain (which is defined as the unpleasant experience that is associated with actual or potential tissue damage[11]). Given the importance of social connection for survival, the definition of social pain must have to be evolutionarily based and include multiple experiences that signal the loss, or potential loss, of social connection or social value, thereby signifying an increased survival risk. Thus, social pain includes experiences in which a relationship is threatened or lost (because the self is devalued, rejected or negatively evaluated), as well as experiences in which a relationship is lost (but the self is not implicated (death of a loved one)), as both of these experiences signify a loss of a protective social bond.

This Review highlights the growing body of literature suggesting a possible overlap in the neural circuitry underlying physical and social pain. This article first summarizes the observational evidence that provides the starting point for the hypothesis that negative social experiences are painful and considers why the physical pain signal may have been co-opted to prevent social disconnection. The neurochemical and neural substrates that process physical pain are then reviewed, and research showing that some of these substrates also process social pain is summarized. Next, some of the

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Does Rejection Hurt? An fMRI Study of Social Exclusion

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A neuroimaging study examined the neural correlates of social exclusion and tested the hypothesis that the brain bases of social pain are similar to those of physical pain. Participants were scanned while playing a virtual ball-tossing game in which they were ultimately excluded. Paralleling results from physical pain studies, the anterior cingulate cortex (ACC) was more active during exclusion than during inclusion and correlated positively with self-reported distress. Right ventral prefrontal cortex (RVPFC) was active during exclusion and correlated negatively with self-reported distress. ACC changes mediated the RVPFC-distress correlation, suggesting that RVPFC regulates the distress of social exclusion by disrupting ACC activity.

It is a basic feature of human experience to feel soothed in the presence of close others and to feel distressed when left behind. Many languages reflect this experience in the assignment of physical pain words ("hurt feelings") to describe experiences of social separation (1). However, the notion that the pain associated with losing someone is similar to the pain experienced upon physical injury seems more metaphorical than real. Nevertheless, evidence suggests that some of the same neural machinery recruited in the experience of physical pain may also be involved in the experience of pain associated with social separation or

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Does rejection hurt?

Research Report

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Acetaminophen Reduces Social Pain: Behavioral and Neural Evidence

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Abstract

Pain, whether caused by physical injury or social rejection, is an inevitable part of life. These two types of pain—physical and social—may rely on some of the same behavioral and neural mechanisms that register pain-related affect. To the extent that these pain processes overlap, acetaminophen, a physical pain suppressant that acts through central rather than peripheral neural mechanisms, may also reduce behavioral and neural responses to social rejection. In two experiments, participants took acetaminophen or placebo daily for 3 weeks. Doses of acetaminophen reduced reports of social pain on a daily basis (Experiment 1). We used functional magnetic resonance imaging to measure participants' brain activity (Experiment 2) and found that acetaminophen reduced neural responses to social rejection in brain regions previously associated with distress caused by social pain and the affective component of physical pain (dorsal anterior cingulate cortex, anterior insula). Thus, acetaminophen reduces behavioral and neural responses associated with the pain of social rejection, demonstrating substantial overlap between social and physical pain.

Keywords

social rejection, social exclusion, social pain, acetaminophen, fMRI

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Suffering social rejection may seem completely different from suffering physical injury, but recent evidence suggests that the pain of social rejection and physical pain are interconnected. People who feel socially rejected often describe their feelings using words that are typically associated with physical pain, complaining, for example, of hurt feelings. In fact, the use of physical pain words to describe one's feelings following social rejection is common to many languages, indicating a potentially universal phenomenon (MacDonald & Leary, 2005). Is the pain of social rejection (social pain; MacDonald, 2009) truly comparable to physical pain, or is the expression merely metaphorical? If the similarities between physical and social pain are more than just metaphorical, can researchers alleviate social pain with medications typically used to reduce physical pain? The current experiments provide the first direct evidence that answers these questions.

Studies suggest that the similar linguistic descriptions of social and physical pain extend beyond metaphor, and demonstrate overlap in the neurobiological systems underlying physical pain and social pain (DeWall & Baumeister, 2006; Eisenberger, Lieberman, & Williams, 2003; Way, Taylor, & Eisenberger, 2009). In the present experiments, we examined one functional consequence of the hypothesis that social and physical pain rely on shared neurobiological systems: whether acetaminophen, a common physical pain reliever, also reduces social pain. We tested this hypothesis using behavioral (Experiment 1) and functional magnetic resonance imaging (fMRI; Experiment 2) methods in two independent samples.

Overlap of Social and Physical Pain

Overlapping social and physical pain systems probably conferred an advantage among our evolutionary ancestors. Because many mammalian species have an extended infancy—during

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Rejected, Excluded, Ignored: The Perception of Social Rejection and Mental Disorders – A Review

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Keywords
Rejection sensitivity · Rejection sensitivity questionnaire (RSQ) · Mental disorders

Summary
This article presents an overview of the impact of rejection sensitivity on subclinical symptomatics and mental disorders. Rejection sensitivity is the tendency to anxiously expect, readily perceive and overreact to rejection. From 1075 articles, we selected those 21 studies that investigate rejection sensitivity using the rejection sensitivity questionnaire (RSQ) in clinical and non-clinical samples showing different aspects of the relationship between rejection sensitivity and various subclinical syndromes and mental disorders. The results suggest an overall role of rejection sensitivity for the etiology as well as the maintenance of mental problems. Positive associations have been found between rejection sensitivity and borderline symptoms, depressive symptoms, social anxiety and aggressive behavior, whereas the attention deficit hyperactivity disorder (ADHD) and psychotic symptoms did not show any relationship with rejection sensitivity. Recommendations for research and practice are discussed.

Schlüsselwörter
Zurückweisungsempfindlichkeit · Rejection Sensitivity Questionnaire (RSQ) · Psychische Störungen

Summary
Dieser Artikel gibt eine Übersicht über die Bedeutung von Zurückweisungsempfindlichkeit für subklinische Syndrome und psychische Störungen. Mit Zurückweisungsempfindlichkeit wird die Disposition bezeichnet, in sozialen Situationen davon auszugehen zurückgewiesen zu werden, potenzielle soziale Zurückweisungen vorschnell wahrzunehmen und extrem darauf zu reagieren. Aus 1075 Artikeln wurden 21 extrahiert, die Zurückweisungsempfindlichkeit mit dem Rejection Sensitivity Questionnaire (RSQ) an klinischen und nichtklinischen Stichproben untersuchen und Zusammenhänge zu psychopathologischen Symptomen und psychischen Störungen herstellen. Die Ergebnisse der Forschungsbefunde geben erste Hinweise auf eine störungsübergreifende Bedeutung der Zurückweisungsempfindlichkeit sowohl für die Ätiologie als auch für die Aufrechterhaltung psychischer Probleme. Borderline-Symptome, depressive Symptomatik, soziale Ängste und aggressive Verhaltensweisen gehen mit hohen Werten der Zurückweisungsempfindlichkeit einher, während die Aufmerksamkeitsdefizit-/Hyperaktivitätsstörung (ADHS) und psychotische Symptome nicht mit Zurückweisungsempfindlichkeit korrelieren. Empfehlungen für Forschung und Praxis werden diskutiert.

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An experimental study of shared sensitivity to physical pain and social rejection

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Abstract

Recent evidence points to a possible overlap in the neural systems underlying the distressing experience that accompanies physical pain and social rejection (Eisenberger et al., 2003). The present study tested two hypotheses that stem from this suggested overlap, namely: (1) that baseline sensitivity to physical pain will predict sensitivity to social rejection and (2) that experiences that heighten social distress will heighten sensitivity to physical pain as well. In the current study, participants' baseline cutaneous heat pain unpleasantness thresholds were assessed prior to the completion of a task that manipulated feelings of social distress. During this task, participants played a virtual ball-tossing game, allegedly with two other individuals, in which they were either continuously included (social inclusion condition) or they were left out of the game by either never being included or by being overtly excluded (social rejection conditions). At the end of the game, three pain stimuli were delivered and participants rated the unpleasantness of each. Results indicated that greater baseline sensitivity to pain (lower pain unpleasantness thresholds) was associated with greater self-reported social distress in response to the social rejection conditions. Additionally, for those in the social rejection conditions, greater reports of social distress were associated with greater reports of pain unpleasantness to the thermal stimuli delivered at the end of the game. These results provide additional support for the hypothesis that pain distress and social distress share neurocognitive substrates. Implications for clinical populations are discussed.

Keywords: Pain sensitivity; Social exclusion; Social pain; Dorsal anterior cingulate cortex; Social rejection; Pain threshold; Pain unpleasantness

1. Introduction

Research has begun to reveal similarities in the neurocognitive processes underlying physical pain and 'social distress,' the painful feelings following social rejection or exclusion (Eisenberger and Lieberman, 2004; MacDonald and Leary, 2005). English and non-English speakers alike use physical pain words to describe experiences of social distress when complaining of "broken hearts" or "hurt feelings," implicitly indicating the phenomenological similarity between physical pain and social distress, linguistically (MacDonald and Leary, 2005). In addition, recent neuroimaging work has revealed that the dorsal anterior cingulate cortex (dACC), commonly associated with the "unpleasantness" of physical pain (Rainville et al., 1997), is also activated during the distressing experience of social rejection, and its activity correlates strongly with self-reported social distress (Eisenberger et al., 2003). Moreover, based on the

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Why Does Social Exclusion Hurt? The Relationship Between Social and Physical Pain

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Does rejection hurt?

Neural Dynamics of Rejection Sensitivity

Ethan Kross, Tobias Egner, Kevin Ochsner, Joy Hirsch, and Geraldine Downey

Abstract

■ Rejection sensitivity (RS) is the tendency to anxiously expect, readily perceive, and intensely react to rejection. This study used functional magnetic resonance imaging to explore whether individual differences in RS are mediated by differential recruitment of brain regions involved in emotional appraisal and/or cognitive control. High and low RS participants were scanned while viewing either representational paintings depicting themes of rejection and acceptance or nonrepresentational control paintings matched for positive or negative valence, arousal and interest level. Across all participants, rejection versus acceptance images activated regions of the brain involved in processing affective stimuli (posterior cingulate, insula), and cognitive control (dorsal anterior cingulate cortex; medial frontal cortex). Low and high RS individuals' responses to rejection versus acceptance images were not, however, identical. Low RS individuals displayed significantly more activity in left inferior and right dorsal frontal regions, and activity in these areas correlated negatively with participants' self-report distress ratings. In addition, control analyses revealed no effect of viewing negative versus positive images in any of the areas described above, suggesting that the aforementioned activations were involved in rejection-relevant processing rather than processing negatively valenced stimuli per se. Taken together, these findings suggest that responses in regions traditionally implicated in emotional processing and cognitive control are sensitive to rejection stimuli irrespective of RS, but that low RS individuals may activate prefrontal structures to regulate distress associated with viewing such images. ■

INTRODUCTION

Rejection is a common and potentially distressing human experience. Yet, people vary considerably in how they react to it. Some people respond to rejection with equanimity, remaining calm and composed in the face of challenging interpersonal threats. Others respond to rejection in ways that compromise their well-being and relationships. For example, they become angry, dejected or withdrawn.

The rejection sensitivity (RS) model was introduced to explain why some individuals are more vulnerable to rejection experiences than others (Downey & Feldman, 1996). According to this theory, sensitivity to rejection cues, and subsequent overreactions, results from a natural learning process—high levels of RS develop as a result of early, prolonged, or acute rejection experiences with caregivers and significant others. Through such experiences, individuals learn to expect rejection in situations involving close others, and because these relationships are significant, the expectations people develop are laden with anxiety. Thus, anxious expectations of rejection characterize the high RS individual. These anxious expectations, in turn, lead high RS individuals to display a heightened attentiveness to perceiving negativity in rejection-relevant cues and situations, and to display intense affective reactions to them (e.g., Levy, Ayduk, & Downey, 2001; Downey, Freitas, Michaelis, & Khouri, 1998).

A hallmark feature of RS is that the disposition becomes automatically activated in an *if ... then ...* manner by cues related to the concept of rejection, functioning to prepare the person to defend against the threat of rejection. Prior research has found, for example, that exposing high RS individuals to images that convey rejection themes (i.e., paintings depicting people who appear socially disconnected or lonely) or words associated with the concept of rejection (e.g., abandon, betray, exclude) leads to the activation of the defensively motivated RS schema and the negative thoughts, feelings, and physiological responses associated with it (Romero-Canyas & Downey, 2005; Downey, Mougios, Ayduk, London, & Shoda, 2004; Ayduk, Downey, Testa, Yen, & Shoda, 1999). This article examines the neural processes underlying the more intense distress-related affective responses that high RS people selectively show in response to rejection cues. Toward this end, we used functional magnetic resonance imaging (fMRI) to explore differences in brain activity between high and low RS individuals in response

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Review

Behavioral neuroscience of psychological pain

Mauricio R. Papini[a,*], Perry N. Fuchs[b], Carmen Torres[c]

ARTICLE INFO

ABSTRACT

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Calibrating the Sociometer: The Relationship Between Interpersonal Appraisals and State Self-Esteem

Mark R. Leary, Alison L. Haupt, Kristine S. Strausser, and Jason T. Chokel
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Four experiments examined the functional relationship between interpersonal appraisal and subjective feelings about oneself. Participants imagined receiving one of several positive or negative reactions from another person (Experiments 1, 2, and 3) or actually received information about evaluations (Experiment 4), then completed measures assessing state self-esteem. All 4 studies showed that subjective feelings were a curvilinear, ogive, function of others' appraisals. Although trait self-esteem correlated with state reactions to some effect, it did not moderate participants' reactions to interpersonal feedback.

In the years since symbolic interactionists first discussed the effects of reflected appraisals on people's perceptions of themselves (Cooley, 1902; Mead, 1934), considerable evidence has accumulated to support their assumption that people's thoughts and feelings about themselves reflect, in part, how they believe they are perceived and evaluated by others (Felson, 1993; Hamachek, 1992; Horner, 1993; Shrauger & Schoeneman, 1979). This is presumably true both in the immediate situation (as perceived others' reactions affect self-relevant feelings or state self-esteem) and, over time, as a cumulative history of evaluation affects the self-concept and trait self-esteem.

Recently, Leary and Downs (1995) proposed a model of self-esteem that directly accounts for the link between interpersonal appraisals and self-esteem. According to *sociometer theory*, others' reactions exert such a strong effect on self-esteem because the self-esteem system itself is a subjective monitor or gauge of the degree to which the individual is being included and accepted versus excluded and rejected by other people. Because inclusion in social groups and relationships is essential for physical and psychological well-being, human beings presumably evolved a fundamental motive to maintain a minimum degree of connectedness with other people—a "need to belong" (Ainsworth, 1989; Baumeister & Leary, 1995). To this end, the maintenance of one's interpersonal relationships, a control mechanism may have simultaneously evolved for monitoring the quality of one's relationships vis-à-vis inclusion and exclusion. This system monitors the social environment (often at a nonconscious or preattentive level) for cues connoting exclusion, rejection, and ostracism and alerts the individual by means of negative affect (experienced as a lowered state self-esteem) when such cues are detected (Leary & Baumeister, 1993).

According to this model, situationally induced changes in self-relevant thoughts and feelings should parallel changes in perceived social acceptance. Consistent with the sociometer explanation of state self-esteem, research has shown that people's feelings about themselves are highly sensitive to changes in perceived acceptance and rejection (Leary, Tambor, Terdal, & Downs, 1995). In fact, perceived acceptance and rejection correlated so highly with state self-esteem that Leary et al. observed that "for all practical purposes, self-feelings were a proxy for perceived inclusion" (p. 528).

Regardless of whether one accepts the notion that the self-esteem system evolved as a mechanism for monitoring social inclusion and exclusion, there is little doubt that feelings about the self are strongly affected by others' perceived reactions. In light of this fact, the question arises of the nature of the relationship between interpersonal appraisals and self-feelings. To use the analogy of a physical gauge as before, we may ask how the sociometer is calibrated: precisely how do changes in one's perceptions of others' reactions to oneself affect self-feelings?

Arguments can be offered to support each of four possibilities. The most straightforward is that the sociometer is calibrated such that the relationship between interpersonal evaluations and self-feelings is linear. A perfectly accurate monitor is one in which changes in the entity being measured result in equal (or at least directly proportional) changes in the activity of the monitor across the entire range of possible feedback.

Alternatively, the sociometer may be imperfectly calibrated in that it contains a positive bias, registering more social approval than is actually present. A wealth of data suggests that people perceive self-relevant information in a biased fashion that maintains, if not enhances, their self-esteem (Baumeister, 1993; Taylor & Brown, 1988). If the bias is constant across the full range of interpersonal appraisals, the relationship may still be linear but upwardly biased (much like a fuel gauge that indicates that the gas tank is fuller than it really is).

More likely, however, such an extreme and inviting bias would not be consistent across the full range of interpersonal appraisal but rather would be greater the more negative others' evaluations

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Does low self-esteem enhance social pain? The relationship between trait self-esteem and anterior cingulate cortex activation induced by ostracism

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According to sociometer theory, self-esteem serves as a barometer of the extent to which individuals are socially included or excluded by others. We hypothesized that trait self-esteem would be related to social pain responsiveness, and we used functional magnetic resonance imaging to experimentally investigate this potential relationship. Participants ($n = 26$) performed a cyberball task, a computerized game of catch during which the participants were excluded from the game. Participants then rated the degree of social pain experienced during both inclusion in and exclusion from the game. Individuals with lower trait self-esteem reported increased social pain relative to individuals with higher trait self-esteem, and such individuals also demonstrated a greater degree of dorsal anterior cingulate cortex activation. A psychophysiological interaction analysis revealed a positive connectivity between the dorsal anterior cingulate and prefrontal cortices for the lower trait self-esteem group, and a corresponding negative connectivity for the higher trait self-esteem group. Heightened dorsal anterior cortex activity and a corresponding connection with the prefrontal cortex might be one possible explanation for the greater levels of social pain observed experienced by individuals with low trait self-esteem.

Keywords: self-esteem; social pain; anterior cingulate; ostracism; fMRI

People's thoughts and feelings about themselves in part reflect how they believe they are perceived and evaluated by others (Shrauger and Schoeneman, 1979). This is presumably true both in the moment (as others' perceived reactions have an immediate effect on self-relevant feelings or state self-esteem) and over time (in the form of a cumulative history of evaluation related to self-concept or trait self-esteem). Leary and colleagues proposed a model of self-esteem that directly accounts for the link between this concept and interpersonal appraisals (Leary et al., 1995; Leary and Baumeister, 2000). According to sociometer theory, others' reactions exert a strong effect on self-esteem because the self-esteem system itself serves as a subjective monitor or gauge of the degree to which the individual is being included and accepted versus excluded or rejected by other people. Because social inclusion and relationships are essential for good physical and psychological health, human beings presumably evolved a fundamental motive to maintain some degree of connectedness with other people (Ainsworth, 1989; Leary et al., 1995; Eisenberger and Lieberman, 2004; Macdonald and Leary, 2005). At the same time, successful maintenance of one's interpersonal relationships would require a mechanism whereby the quality of one's relationships vis-a-vis inclusion and exclusion could be monitored. Such a system would monitor the social environment for cues that connote exclusion, rejection, and ostracism, alerting the individual to potential threat by means of lowered state self-esteem when such cues are detected.

According to this proposal, people should feel worse about themselves on days when they feel excluded from others relative to days when they feel included. These fluctuations have been shown to occur within a context of relatively stable baseline levels of trait self-esteem that differ across people. According to Leary and Baumeister (2000), this trait self-esteem is related to past experiences of being rejected or included, and is also associated with people's potential for social inclusion according to their standing on various socially desirable traits, including physical attractiveness and intelligence (Anthony et al., 2007). In an online diary study that employed cross-lagged analysis,

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Psychological Bulletin

Does Low Self-Esteem Predict Depression and Anxiety? A Meta-Analysis of Longitudinal Studies

Julia Friederike Sowislo and Ulrich Orth
University of Basel

Low self-esteem and depression are strongly related, but there is not yet consistent evidence on the nature of the relation. Whereas the vulnerability model states that low self-esteem contributes to depression, the scar model states that depression erodes self-esteem. Furthermore, it is unknown whether the models are specific for depression or whether they are also valid for anxiety. We evaluated the vulnerability and scar models of low self-esteem and depression, and low self-esteem and anxiety, by meta-analyzing the available longitudinal data (covering 77 studies on depression and 18 studies on anxiety). The mean age of the samples ranged from childhood to old age. In the analyses, we used a random-effects model and examined unstandardized effects between the variables controlling for prior levels of the predicted variables. For depression, the findings supported the vulnerability model. The effect of self-esteem on depression ($\beta = -.36$) was significantly stronger than the effect of depression on self-esteem ($\beta = -.09$). In contrast, the effects between low self-esteem and anxiety were relatively balanced: Self-esteem predicted anxiety with $\beta = .10$, and anxiety predicted self-esteem with $\beta = .08$. Moderator analyses were conducted for the effect of low self-esteem on depression, these suggested that the effect is not significantly influenced by gender, age, measure of self-esteem and depression, or time lag between assessments. Future research supports the hypothesized causality of the vulnerability effect of low self-esteem on depression; interventions aimed at increasing self-esteem might be useful in reducing the risk of depression.

Keywords: self-esteem, depression, anxiety, longitudinal studies

There is an overwhelming amount of self-help literature that explains how people can boost and sustain their self-esteem in order to improve their psychological adjustment. But does self-esteem indeed contribute to psychological health or, to put it differently, does low self-esteem compromise a person's psychological adjustment? Previous research suggests that self-esteem is linked to indicators of psychological adjustment such as happiness (H. Cheng & Furnham, 2004; Diener & Diener, 1995), high positive affect and low negative affect (Orth, Robins, & Widaman, 2012), and to the absence, or a low number, of psychological symptoms such as depression (Orth, Robins, Trzesniewski, Maes, & Schmitt, 2009; J. E. Roberts & Monroe, 1992) and bulimia (Vohs et al., 2001). However, with respect to many of these variables, the precise nature of their relation with self-esteem has not ultimately been established (Baumeister, Campbell, Krueger, & Vohs, 2003).

In the present research, we focus on the relation of self-esteem with two important indicators of true psychological adjustment, specifically depression and anxiety.[1] The central goal of this study was to evaluate the vulnerability and scar models of low self-esteem and depression, by meta-analyzing the available longitudinal data. Moreover, we tested whether the vulnerability and scar models (if supported by the data) are specific for depression or whether they are also valid models for anxiety. Finally, we examined moderators that might explain variability in the relation between low self-esteem and depression.

Self-Esteem: Concept, Measurement, Function, and Consequences

Concept of Self-Esteem

The concept of self-esteem has elicited a large body of theoretical accounts and empirical research (see, e.g., Baumeister, 1998; Kernis, 2006; Swann & Bosson, 2010). Historically, the first influential definition of self-esteem dates back to James (1890), who considered self-esteem to be the ratio of success and performance to important life domains. Whereas James focuses to a stronger degree on the individual processes that form self-esteem,

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[1] Throughout this article, we use the term *depression* to denote a continuous variable (i.e., individual differences in depressive affect) rather than a clinical category such as major depressive disorder (American Psychiatric Association, 2000). Taxometric analyses suggest that depression is best conceptualized as a continuous construct (Haslam, Tracey, Lahey, & Waldman, 2005; Lewinsohn, Solomon, Seeley, & Zeiss, 2000; Prisciandaro & Roberts, 2005; Ruscio & Ruscio, 2000).

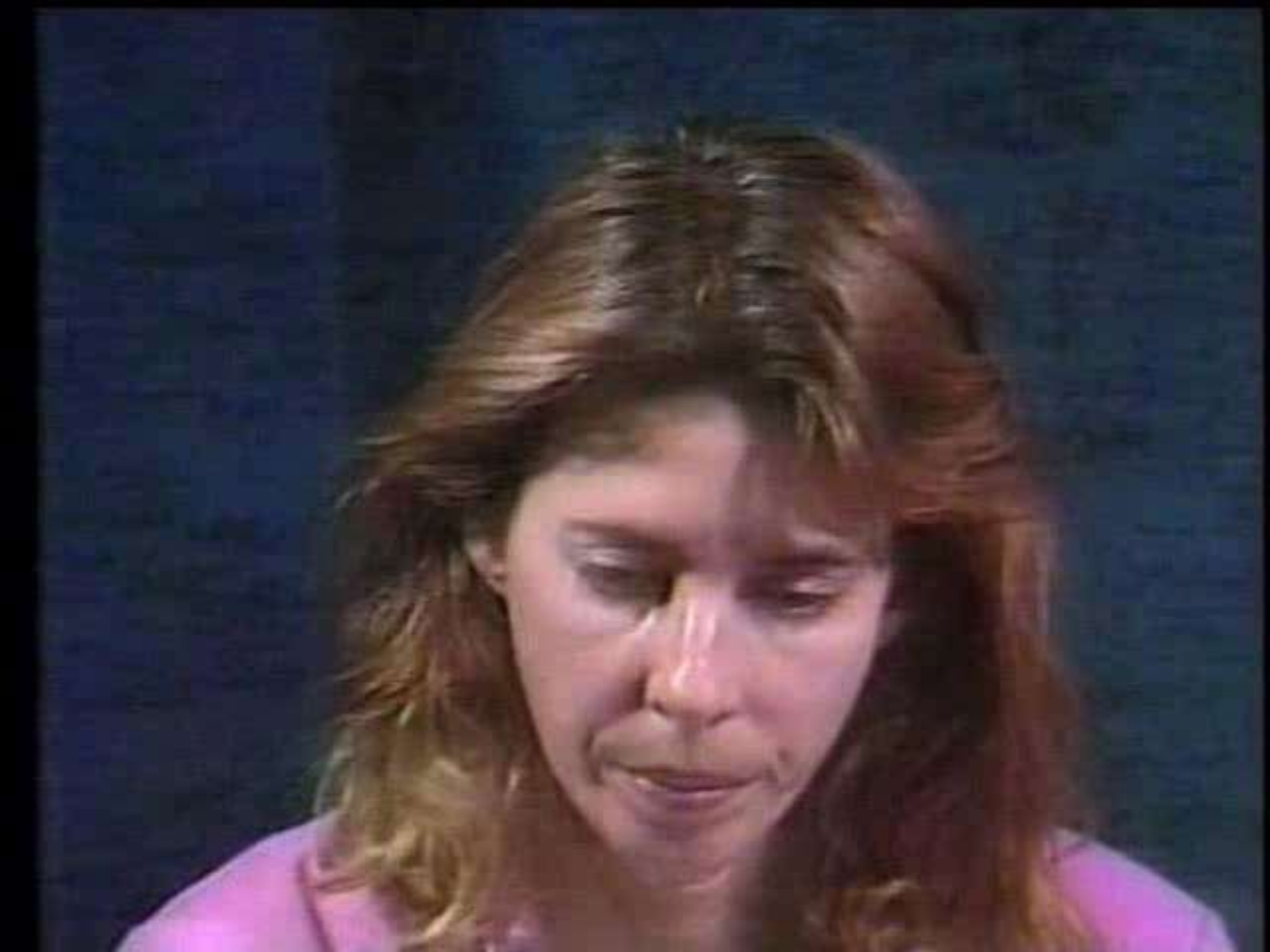
1) Major Depressive Episode

Major Depressive Episode

- **Diagnostic Criteria for Major Depressive Episode**
- A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning: at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.
- Note: Do not include symptoms that are clearly attributable to another medical condition.
- 1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful). (Note: In children and adolescents, can be irritable mood.)
- 2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation).
- 3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. (Note: In children, consider failure to make expected weight gain.)
- 4. Insomnia or hypersomnia nearly every day.
- 5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down).
- 6. Fatigue or loss of energy nearly every day.
- 7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
- 8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either
- by subjective account or as observed by others).
- 9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
- B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- C. The episode is not attributable to the physiological effects of a substance or to another medical condition.
- Note: Responses to a significant loss (e.g., bereavement, financial ruin, losses from a natural disaster, a serious medical illness or disability) may include the feelings of intense sadness, rumination about the loss, insomnia, poor appetite, and weight loss noted in Criterion A, which may resemble a depressive episode. Although such symptoms may be understandable or considered appropriate to the loss, the presence of a major depressive episode in addition to the normal response to a significant loss should also be carefully considered. This decision inevitably requires the exercise of clinical judgment based on the individual's history and the cultural norms for the expression of distress in the context of loss.

Major Depressive Symptoms

- **Common symptoms - Depression:**
  - Feeling of emptiness or worthlessness (as opposed to sadness)
  - Loss of energy and motivation for many or all everyday activities, including washing, feeding and caring for oneself
  - Pessimism and negativity about most things or everything
  - Loss of concentration
  - Loss of perspective
  - Loss of sense of self
  - Self-doubt and self-blame
  - Isolation from friends and family
  - Poor quality of sleep, with early morning waking
  - Inability to get out of bed until late morning or early afternoon
  - Thoughts of death and/or planning suicide can be common, but may be difficult to discuss



Alison is a 38 year old woman who is seeing her GP due to low mood.

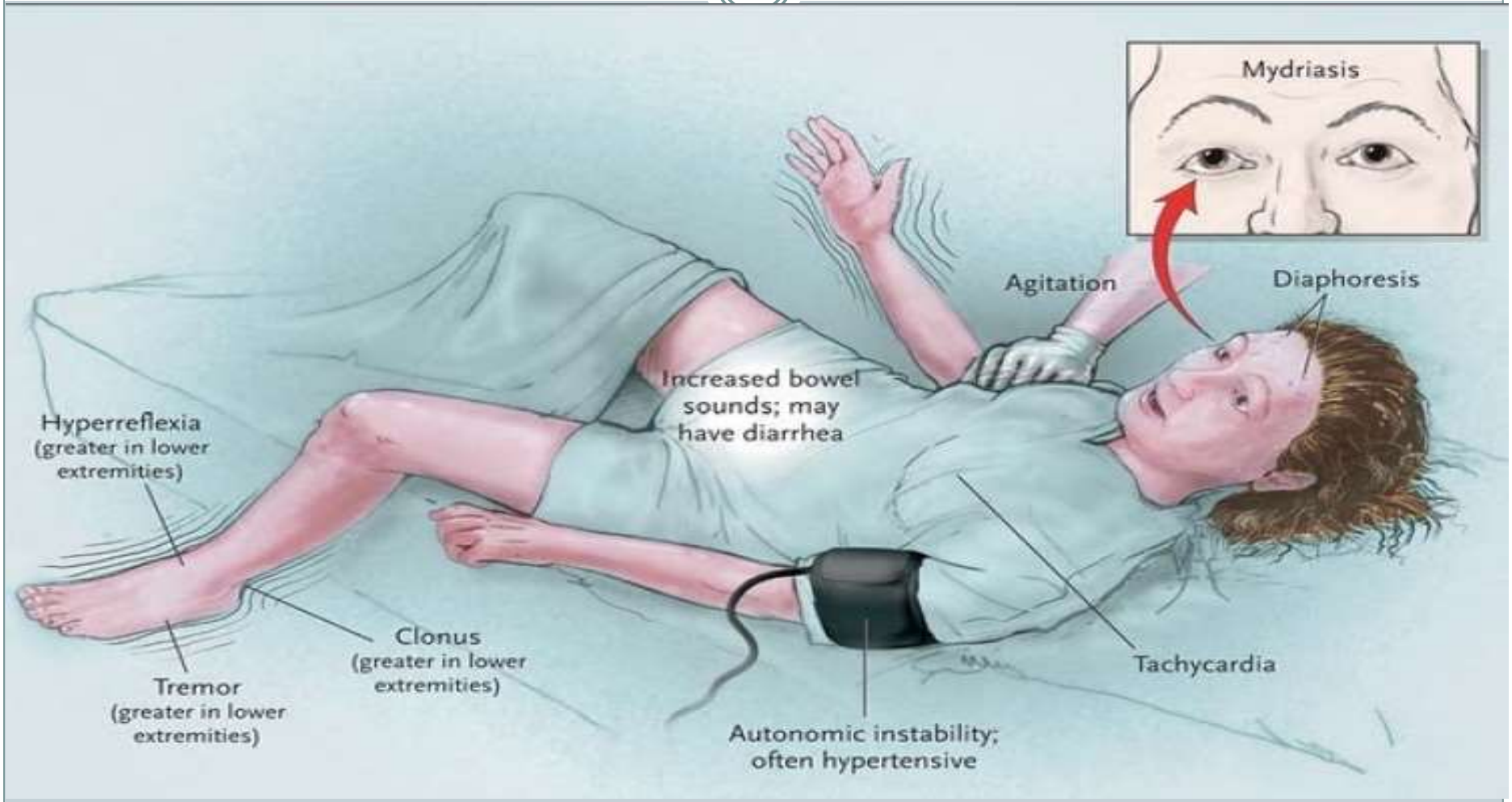
She is divorced and has two children. She works in a local supermarket.

ECT in Modern Psychiatry

Serotonin Shock Syndrome

- **15% consequence of overdose attempt;**
- **Coingestion of any of the following:**
- **Antidepressants:** Monoamine oxidase inhibitors (MAOIs), TCAs, SSRIs, SNRIs, bupropion, nefazodone, trazodone, mirtazapine,
- **Opioids:** tramadol pethidine, fentanyl, pentazocine, buprenorphine, oxycodone, hydrocodone,
- **Stimulants:** MDMA, MDA, diethylpropion, amphetamine, sibutramine, methylphenidate, methamphetamine, cocaine dextromethorphan
- **Psychedelics:** 5-Methoxy-diisopropyltryptamine, LSD
- **Herbs:** St John's Wort, Syrian rue, Panax ginseng, Nutmeg, Yohimbe
- **Others:** tryptophan, L-Dopa, valproate, buspirone, lithium, linezolid, dextromethorphan, 5-hydroxytryptophan, chlorpheniramine, risperidone, olanzapine, ondansetron, granisetron, metoclopramide, ritonavir

Serotonin Shock Syndrome



Antidepressant Pharmacotherapy

- **Selective serotonin reuptake inhibitors (SSRIs):**
- **Citalopram** (Celexa)
- **Escitalopram** (Lexapro, Cipralex)
- **Paroxetine** (Paxil, Seroxat)
- **Fluoxetine** (Prozac)
- **Fluvoxamine** (Luvox)
- **Sertraline** (Zoloft, Lustral)

- **Norepinephrine reuptake inhibitors:**
- **Atomoxetine** (Strattera)
- **Reboxetine** (Edronax)
- **Viloxazine** (Vivalan)

Antidepressant Pharmacotherapy

- **Serotonin–norepinephrine reuptake inhibitors:**
- **Desvenlafaxine** (Pristiq)
- **Duloxetine** (Cymbalta)
- **Milnacipran** (Ixel, Savella)
- **Venlafaxine** (Effexor)

- **Serotonin antagonist and reuptake inhibitors** (SARIs)
- **Etoperidone** (Axiomin, Etonin)
- **Nefazodone** (Serzone, Nefadar)
- **Trazodone** (Desyrel)

- **Norepinephrine-dopamine reuptake inhibitors:**
- **Bupropion** (Wellbutrin, Zyban)

Antidepressant Pharmacotherapy

- **Tricyclic antidepressants**
- (block the reuptake of norepinephrine and serotonin).
- **Amitriptyline** (Elavil, Endep)
- **Clomipramine** (Anafranil)
- **Doxepin** (Adapin, Sinequan)
- **Imipramine** (Tofranil)
- **Trimipramine** (Surmontil)
- **Desipramine** (Norpramin)
- **Nortriptyline** (Pamelor, Aventyl, Noritren)
- **Protriptyline** (Vivactil)

Antidepressant Pharmacotherapy

- **Monoamine oxidase inhibitor:**
- (MAOIs) inhibit the enzyme monoamine oxidase, which breaks down the neurotransmitters dopamine, serotonin, and norepinephrine. As there are potentially fatal interactions between irreversible MAOIs and certain foods (particularly those containing tyramine),
- **Isocarboxazid** (Marplan)
- **Phenelzine** (Nardil)
- **Selegiline** (Eldepryl, Emsam)
- **Tranylcypromine** (Parnate)
- **Moclobemide** (Aurorix, Manerix)
- **Pirlindole** (Pirazidol)

Differential Diagnosis - Depression

- **Autoimmune Disorders;**
- **Bacterial-viral-parasitic infection;**
- **Adjustment Disorders;**
- **Blood disorders;**
- **Chronic Fatigue Syndrome;**
- **Dietary disorders;**
- **Endocrine system disorders (Irregularities in the HPA axis, thyroid dysfunctions);**
- **Adrenal Gland disorders;**
- **Thyroid disorders;**
- **Pituitary disorders and tumours;**
- **Pancreas disorders;**
- **Post-concussion syndrome;**
- **Pseudobulbar affect (secondary to neurodegenerative diseases)**
- **Neurotoxicity & medicine contraindications;**
- **Bipolar disorder;**
- **Nutritional deficiencies;**
- **Sleep disorders.**

Screening tools – PHQ9

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____ DATE: _____

Over the *last 2 weeks*, how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3
add columns:		+	+	
TOTAL:				

10. If you checked off any problems, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all _____
- Somewhat difficult _____
- Very difficult _____
- Extremely difficult _____

PHQ-9 Score	Provisional Diagnosis	Treatment Recommendation
5-9	Minimal symptoms*	Support, educate to call if worse; return in 1 month.
10-14	Minor depression ††	Support, watchful waiting
	Dysthymia*	Antidepressant or psychotherapy
	Major depression, *mild*	Antidepressant or psychotherapy
15-19	Major depression, *moderately severe*	Antidepressant or psychotherapy
≥ 20	Major depression, *severe*	Antidepressant and psychotherapy (especially if not improved on monotherapy)

‘Atypical’ Depression

Atypical Depression

- **Atypical depression**, or **depression with atypical features** as it has been known in the DSM IV, is depression that shares many of the typical symptoms of the psychiatric syndromes major depression or dysthymia but is characterised by improved mood in response to positive events.
- In contrast, people with melancholic depression generally do not experience an improved mood in response to normally pleasurable events.
- Atypical depression also features significant weight gain or an increased appetite, hypersomnia, a heavy sensation in the limbs and interpersonal rejection sensitivity that results in significant social or occupational impairment.

The DSM-IV-TR defines Atypical Depression as a subtype of Major Depressive Disorder with Atypical Features, characterised by:

- Mood reactivity (i.e., mood brightens in response to actual or potential positive events)
- At least two of the following:
  - Significant weight gain or increase in appetite;
  - Hypersomnia (sleeping too much, as opposed to the insomnia present in melancholic depression);
  - Leaden paralysis (i.e., heavy, leaden feelings in arms or legs);
  - Long-standing pattern of interpersonal rejection sensitivity (not limited to episodes of mood disturbance) that results in significant social or occupational impairment.


Depression 1

2) Bipolar Disorder

Bipolar Disorder type I

- **Diagnostic Criteria for Bipolar 1**
- For a diagnosis of bipolar I disorder, it is necessary to meet the following criteria for a manic episode. The manic episode may have been preceded by and may be followed by hypomanic or major depressive episodes.:

- **Manic Episode**
- A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased goal-directed activity or energy, lasting at least 1 week and present most of the day, nearly every day (or any duration if hospitalization is necessary).
- B. During the period of mood disturbance and increased energy or activity, three (or more) of the following symptoms (four if the mood is only irritable) are present to a significant degree and represent a noticeable change from usual behavior:
- 1. Inflated self-esteem or grandiosity.
- 2. Decreased need for sleep (e.g., feels rested after only 3 hours of sleep).
- 3. More talkative than usual or pressure to keep talking.
- 4. Flight of ideas or subjective experience that thoughts are racing.
- 5. Distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli), as reported or observed.
- 6. Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation (i.e., purposeless non-goal-directed activity).
- 7. Excessive involvement in activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments).
- C. The mood disturbance is sufficiently severe to cause marked impairment in social or occupational functioning or to necessitate hospitalization to prevent harm to self or others, or there are psychotic features.
- D. The episode is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication, other treatment) or to another medical condition.

- Note: A full manic episode that emerges during antidepressant treatment (e.g., medication, electroconvulsive therapy) but persists at a fully syndromal level beyond the physiological effect of that treatment is sufficient evidence for a manic episode and,
- therefore, a bipolar I diagnosis.
- Note: Criteria A-D constitute a manic episode. At least one lifetime manic episode is required for the diagnosis of bipolar I disorder. (continued)

Bipolar Disorder (type II)

- **Diagnostic Criteria for Bipolar II**
- For a diagnosis of bipolar II disorder, it is necessary to meet the following criteria for a current or past hypomanic episode and the following criteria for a current or past major depressive episode:

- **Hypomanic Episode**
- A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased activity or energy, lasting at least 4 consecutive days and present most of the day, nearly every day.
- B. During the period of mood disturbance and increased energy and activity, three (or more) of the following symptoms have persisted (four if the mood is only irritable), represent a noticeable change from usual behavior, and have been present to a significant degree:
- 1. Inflated self-esteem or grandiosity.
- 2. Decreased need for sleep (e.g., feels rested after only 3 hours of sleep).
- 3. More talkative than usual or pressure to keep talking.
- 4. Flight of ideas or subjective experience that thoughts are racing.
- 5. Distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli), as reported or observed/ed.
- 6. Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation.
- 7. Excessive involvement in activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments).
- C. The episode is associated with an unequivocal change in functioning that is uncharacteristic of the individual when not symptomatic.
- D. The disturbance in mood and the change in functioning are observable by others.
- E. The episode is not severe enough to cause marked impairment in social or occupational functioning or to necessitate hospitalization. If there are psychotic features, the episode is, by definition, manic.
- B. Several inattentive or hyperactive-impulsive symptoms were present prior to age 12 years.
- C. Several inattentive or hyperactive-impulsive symptoms are present in two or more settings (e.g., at home, school, or work; with friends or relatives; in other activities).
- D. There is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning.
- E. The symptoms do not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal).
- F. The episode is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication or other treatment).

- Note: A full hypomanic episode that emerges during antidepressant treatment (e.g., medication, electroconvulsive therapy) but persists at a fully syndromal level beyond the physiological effect of that treatment is sufficient evidence for a hypomanic episode diagnosis. However, caution is indicated so that one or two symptoms (particularly increased irritability, edginess, or agitation following antidepressant use) are not taken as sufficient for diagnosis of a hypomanic episode, nor necessarily indicative of a bipolar diathesis.

Bipolar Mania Symptoms

- **Common symptoms - Mania:**
  - Incoherent, rapid or disjointed thinking
  - Talkative
  - Severely impaired judgement
  - Ever changing plans and ideas
  - Constant elation and/or euphoria
  - Inappropriate optimism
  - Grandiose delusions or ideas
  - Gross over-estimation of personal capability
  - Waking early and highly energised
  - Need for little sleep (less than 5 hours)
  - Promiscuous/increased sexual behaviour
  - Buying and spending freely, beyond financial means
  - Verbal aggression towards partner, relatives & friends

Bipolar Disorder - Mixed States

- **Manic / Hypomanic episode:**
- Elevated / expansive mood
- Inflated self-esteem / grandiosity
- Over talkativeness
- Pressure of Speech
- Flights of ideas / racing thoughts
- Increased energy / goal-directed activities
- Increased risky activities
- Decreased need for sleep

- **Depressed episode:**
- Prominent depressed mood
- Anhedonia
- Significant weight loss (or gain)
- Insomnia or hypersomnia
- Psychomotor agitation or retardation
- Loss of energy
- Feelings of worthlessness or guilt
- Decreased concentration / indecisiveness
- Suicidal ideation

- **Episode with mixed state:**
- Three or more manic / hypomanic symptoms PLUS three or more depressive symptoms in MDE

Bipolar Disorder Classifications

- **Mild, Moderate and Severe classifications:**

- **Bipolar Type I disorder:**
- A syndrome with complete manic symptoms occurring during the episode

- **Bipolar Type II disorder:**
- Hypomania: characterised by depression and episodes of mania that don't meet the full criteria for manic syndrome

- **Hypomania:**
- Symptoms are similar to those of mania, although they do not reach the same level of severity or cause the same degree of social impairment.
- Although hypomania is often associated with an elevated mood and very little insight into it, patients do not usually exhibit psychotic symptoms, racing thoughts or marked psychomotor agitation

- **Rapid-Cycling Bipolar Disorder:**
- Occurrence of at least four episodes – both retarded depression and hypomania / mania – in a year

- **Labile:**
- A mood and / or affect that switches rapidly from one extreme to another. For example, a patient can be laughing and euphoric one minute, following by a display of intense anger and then extreme sadness in the following minutes of an interview

John Riley is a 36 year old man who is seeing a psychiatrist due to concerns raised by his GP.

He works as a mechanic and lives with his parents.

Lithium Therapy

- **Lithium is sold under various brand names, including:**
- Cibalith
- Carbolith
- Duralith
- Eskalith
- Lithane
- Lithobid
- Lithonate

- **Acute Toxicity**
- Diarrhoea
- Dizziness
- Nausea
- Stomach pains
- Vomiting
- Weakness

Anticonvulsants

- **Anticonvulsants (not all approved for the treatment of Bipolar Disorder)**
- **Valproic acid (Depakine),**
- **Divalproex sodium** (Depakote),
- **Sodium Valproate** (Depacon, Epilim) –**Lamotrigine** (Lamictal)
- **Carbamazepine** (Tegretol) **Oxcarbazepine** (Trileptal) – **Oxcarbazepine**
- **Topiramate** (Topamax)
- **Riluzole** (Rilutek)
- **Gabapentin** (Neurontin)

Differential Diagnosis - Bipolar

- **Mood disorder due to general medical condition;**
- **Substance-induced mood disorder;**
- **Depression;**
- **Psychosis / Schizophrenia / Schizoaffective Disorder;**
- **Borderline Personality Disorder;**
- **ADHD;**
- **Thyroid dysfunction;**
- **Hormone imbalances**

3) Anxiety Disorders

Anxiety Disorders

- 4) Generalised Anxiety Disorder
- 5) Panic Disorder
- 6) Agoraphobia
- 7) Obsessive Compulsive Disorder
- 8) Post-Traumatic Stress Disorder

4) Generalised Anxiety Disorder

- **Diagnostic Criteria for Generalised Anxiety Disorder**
- A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
- B. The individual finds it difficult to control the worry.
- C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months);
- Note: Only one item is required in children.
- 1. Restlessness or feeling keyed up or on edge.
- 2. Being easily fatigued.
- 3. Difficulty concentrating or mind going blank.
- 4. Irritability.
- 5. Muscle tension.
- 6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).
- D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).
- F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).

Somatic symptoms of Autonomic Arousal

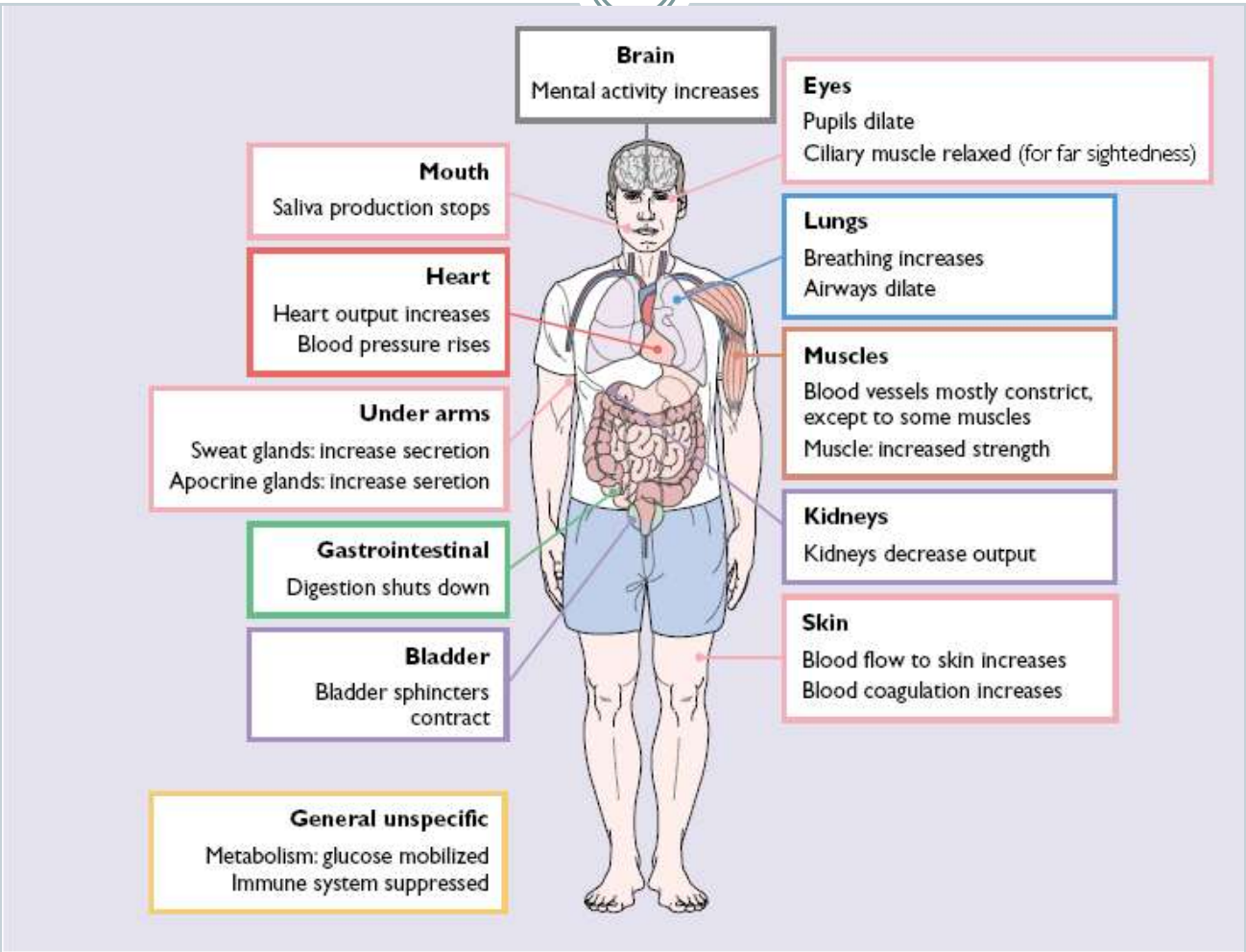


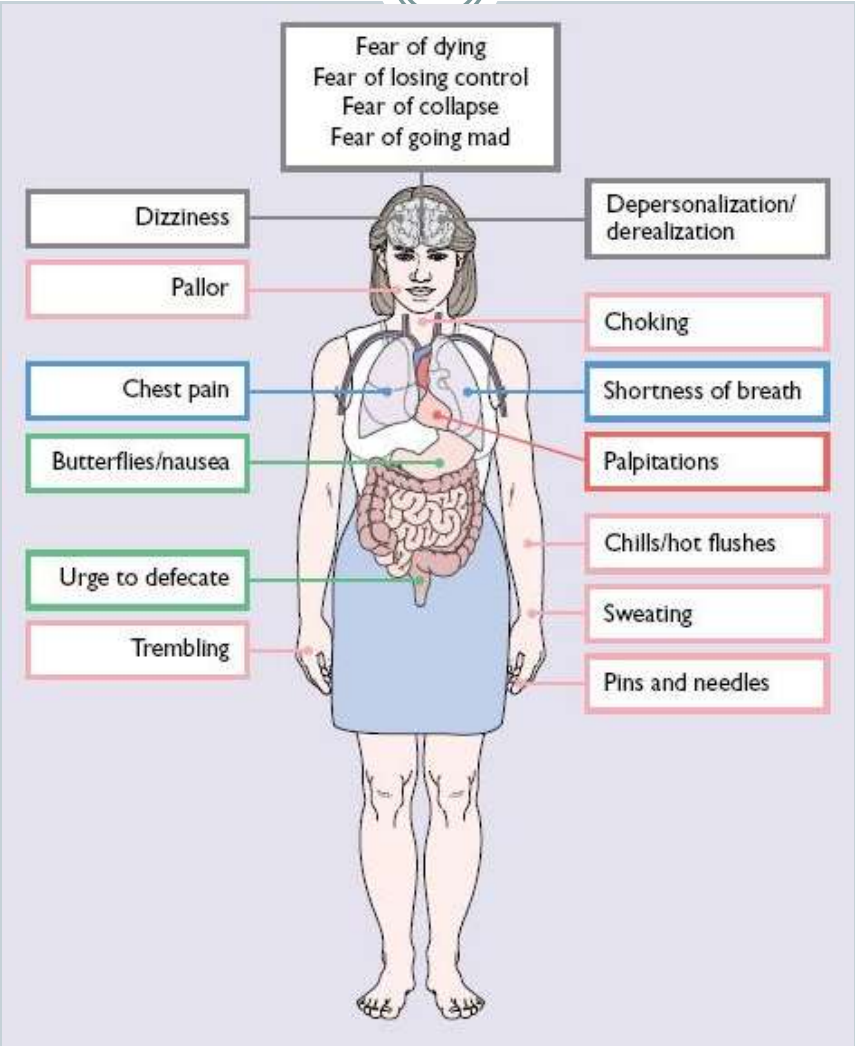
Figure 5.2 The physiologic response to 'flight or fight' stimuli

5) Panic Disorder

- **Diagnostic Criteria for Panic Disorder**
- A. Recurrent unexpected panic attacks. A panic attack is an abrupt surge of intense fear or intense discomfort that reaches a peak within minutes, and during which time four (or more) of the following symptoms occur;
- Note: The abrupt surge can occur from a calm state or an anxious state.
- 1. Palpitations, pounding heart, or accelerated heart rate.
- 2. Sweating.
- 3. Trembling or shaking.
- 4. Sensations of shortness of breath or smothering.
- 5. Feelings of choking.
- 6. Chest pain or discomfort.
- 7. Nausea or abdominal distress.
- 8. Feeling dizzy, unsteady, light-headed, or faint.
- 9. Chills or heat sensations.
- 10. Paresthesias (numbness or tingling sensations).
- 11. Derealization (feelings of unreality) or depersonalization (being detached from oneself).
- 12. Fear of losing control or “going crazy.”
- 13. Fear of dying.

- Note: Culture-specific symptoms (e.g., tinnitus, neck soreness, headache, uncontrollable screaming or crying) may be seen. Such symptoms should not count as one of the four required symptoms.
- B. At least one of the attacks has been followed by 1 month (or more) of one or both of the following:
- 1. Persistent concern or worry about additional panic attacks or their consequences (e.g., losing control, having a heart attack, “going crazy”).
- 2. A significant maladaptive change in behavior related to the attacks (e.g., behaviors designed to avoid having panic attacks, such as avoidance of exercise or unfamiliar situations).

Somatic symptoms and complications of Panic



Julie is a 48 year old woman who is seeing her GP due to anxiety symptoms.

She is married and currently off sick from her job as a bank clerk.

6) Agoraphobia

- **Diagnostic Criteria for Agoraphobia**
- A. Marked fear or anxiety about two (or more) of the following five situations:
- 1. Using public transportation (e.g., automobiles, buses, trains, ships, planes).
- 2. Being in open spaces (e.g., parking lots, marketplaces, bridges).
- 3. Being in enclosed places (e.g., shops, theaters, cinemas).
- 4. Standing in line or being in a crowd.
- 5. Being outside of the home alone.
- B. The individual fears or avoids these situations because of thoughts that escape might be difficult or help might not be available in the event of developing panic-like symptoms or other incapacitating or embarrassing symptoms (e.g., fear of falling in the elderly; fear of incontinence).
- C. The agoraphobic situations almost always provoke fear or anxiety.
- D. The agoraphobic situations are actively avoided, require the presence of a companion, or are endured with intense fear or anxiety.
- E. The fear or anxiety is out of proportion to the actual danger posed by the agoraphobic situations and to the sociocultural context.
- F. The fear, anxiety, or avoidance is persistent, typically lasting for 6 months or more.
- G. The fear, anxiety, or avoidance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- H. If another medical condition (e.g., inflammatory bowel disease, Parkinson's disease) is present, the fear, anxiety, or avoidance is clearly excessive.
- I. The fear, anxiety, or avoidance is not better explained by the symptoms of another mental disorder—for example, the symptoms are not confined to specific phobia, situational type; do not involve only social situations (as in social anxiety disorder): and are not related exclusively to obsessions (as in obsessive-compulsive disorder), perceived defects or flaws in physical appearance (as in body dysmorphic disorder), reminders of traumatic events (as in posttraumatic stress disorder), or fear of separation (as in separation anxiety disorder).

- Note: Agoraphobia is diagnosed irrespective of the presence of panic disorder. If an individual's presentation meets criteria for panic disorder and agoraphobia, both diagnoses should be assigned.

7) Obsessive-Compulsive Disorder

- **Diagnostic Criteria for Obsessive Compulsive Disorder**
- A. Presence of obsessions, compulsions, or both:
- Obsessions are defined by (1) and (2):
- 1. Recurrent and persistent thoughts, urges, or images that are experienced, at some time during the disturbance, as intrusive and unwanted, and that in most individuals cause marked anxiety or distress.
- 2. The individual attempts to ignore or suppress such thoughts, urges, or images, or to neutralize them with some other thought or action (i.e., by performing a compulsion).
- Compulsions are defined by (1) and (2):
- 1. Repetitive behaviors (e.g., hand washing, ordering, checking) or mental acts (e.g. Praying, counting, repeating words silently) that the individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly.
- 2. The behaviors or mental acts are aimed at preventing or reducing anxiety or distress, or preventing some dreaded event or situation; however, these behaviors or mental acts are not connected in a realistic way with what they are designed to neutralize or prevent, or are clearly excessive.
- Note: Young children may not be able to articulate the aims of these behaviors or mental acts.
- B. The obsessions or compulsions are time-consuming (e.g., take more than 1 hour per day) or cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- C. The obsessive-compulsive symptoms are not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition.
- D. The disturbance is not better explained by the symptoms of another mental disorder (e.g., excessive worries, as in generalized anxiety disorder; preoccupation with appearance, as in body dysmorphic disorder; difficulty discarding or parting with possessions, as in hoarding disorder; hair pulling, as in trichotillomania [hair-pulling disorder]; skin picking, as in excoriation [skin-picking] disorder; stereotypies, as in stereotypic movement disorder; ritualized eating behavior, as in eating disorders; preoccupation with substances or gambling, as in substance-related and addictive disorders; preoccupation with having an illness, as in illness anxiety disorder; sexual urges or fantasies, as in paraphilic disorders; impulses, as in disruptive, impulse-control, and conduct disorders; guilty ruminations, as in major depressive disorder; thought insertion or delusional preoccupations, as in schizophrenia spectrum and other psychotic disorders; or repetitive patterns of behavior, as in autism spectrum disorder).

- Specify if:
- With good or fair insight: The individual recognizes that obsessive-compulsive disorder beliefs are definitely or probably not true or that they may or may not be true.
- With poor insight: The individual thinks obsessive-compulsive disorder beliefs are probably true.
- With absent insight/delusional beliefs: The individual is completely convinced that obsessive-compulsive disorder beliefs are true.


BBC

8) Post-Traumatic Stress Disorder

8) Post-Traumatic Stress Disorder

- **Diagnostic Criteria for Post-traumatic stress disorder**
- Note: The following criteria apply to adults, adolescents, and children older than 6 years. For children 6 years and younger, see corresponding criteria below.
- A. Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
- 1. Directly experiencing the traumatic event(s).
- 2. Witnessing, in person, the event(s) as it occurred to others.
- 3. Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
- 4. Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains: police officers repeatedly exposed to details of child abuse).
- Note: Criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.
- B. Presence of one (or more) of the following intrusion symptoms associated with the traumatic event(s), beginning after the traumatic event(s) occurred:
- 1. Recurrent, involuntary, and intrusive distressing memories of the traumatic event(s).
- 2. Recurrent distressing dreams in which the content and/or affect of the dream are related to the traumatic event(s).
- 3. Dissociative reactions (e.g., flashbacks) in which the individual feels or acts as if the traumatic event(s) were recurring. (Such reactions may occur on a continuum, with the most extreme expression being a complete loss of awareness of present surroundings.)
- 4. Intense or prolonged psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- 5. Marked physiological reactions to internal or external cues that symbolize or resemble an aspect of the traumatic event(s).
- C. Persistent avoidance of stimuli associated with the traumatic event(s), beginning after the traumatic event(s) occurred, as evidenced by one or both of the following:
- 1. Avoidance of or efforts to avoid distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).
- 2. Avoidance of or efforts to avoid external reminders (people, places, conversations, activities, objects, situations) that arouse distressing memories, thoughts, or feelings about or closely associated with the traumatic event(s).

- (Continued)

8) Post-Traumatic Stress Disorder

- **Diagnostic Criteria for Post-traumatic stress disorder (continued)**
- D. Negative alterations in cognitions and mood associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
- 1. Inability to remember an important aspect of the traumatic event(s) (typically due to dissociative amnesia and not to other factors such as head injury, alcohol, or drugs).
- 2. Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g., "I am bad," "No one can be trusted," 'The world is completely dangerous," "My whole nervous system is permanently ruined").
- 3. Persistent, distorted cognitions about the cause or consequences of the traumatic event(s) that lead the individual to blame himself/herself or others.
- 4. Persistent negative emotional state (e.g., fear, horror, anger, guilt, or shame).
- 5. Markedly diminished interest or participation in significant activities.
- 6. Feelings of detachment or estrangement from others.
- 7. Persistent inability to experience positive emotions (e.g., inability to experience happiness, satisfaction, or loving feelings).
- E. Marked alterations in arousal and reactivity associated with the traumatic event(s), beginning or worsening after the traumatic event(s) occurred, as evidenced by two (or more) of the following:
- 1. Irritable behavior and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects.
- 2. Reckless or self-destructive behavior.
- 3. Hypervigilance.
- 4. Exaggerated startle response.
- 5. Problems with concentration.
- 6. Sleep disturbance (e.g., difficulty falling or staying asleep or restless sleep).
- F. Duration of the disturbance (Criteria B, C, D, and E) is more than 1 month.
- G. The disturbance causes clinically significant distress or impairment in social, occupational,
- or other important areas of functioning.

- (continued)

8) Post-Traumatic Stress Disorder

- Specify whether:
- **With dissociative symptoms:** The individual's symptoms meet the criteria for posttraumatic stress disorder, and in addition, in response to the stressor, the individual experiences persistent or recurrent symptoms of either of the following:
- 1. Depersonalization: Persistent or recurrent experiences of feeling detached from, and as if one were an outside observer of, one's mental processes or body (e.g., feeling as though one were in a dream; feeling a sense of unreality of self or body or of time moving slowly).
- 2. Derealization: Persistent or recurrent experiences of unreality of surroundings (e.g., the world around the individual is experienced as unreal, dreamlike, distant, or distorted).

- Note: To use this subtype, the dissociative symptoms must not be attributable to the physiological effects of a substance (e.g., blackouts, behavior during alcohol intoxication) or another medical condition (e.g., complex partial seizures).

- Specify if:
- With delayed expression: If the full diagnostic criteria are not met until at least 6 months after the event (although the onset and expression of some symptoms may be

8) Post-Traumatic Stress Disorder

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- With dissociative symptoms: The individual's symptoms meet the criteria for posttraumatic stress disorder, and in addition, in response to the stressor, the individual experiences persistent or recurrent symptoms of either of the following:

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EXTRA
MINUTES

9) Chronic Psychosis & Schizophrenia

9) Schizophrenia

- **Diagnostic Criteria for Schizophrenia**
- A. Two (or more) of the following, each present for a significant portion of time during a 1 -month period (or less if successfully treated). At least one of these must be (1), (2), or (3):
- 1. Delusions.
- 2. Hallucinations.
- 3. Disorganized speech (e.g., frequent derailment or incoherence).
- 4. Grossly disorganized or catatonic behavior.
- 5. Negative symptoms (i.e., diminished emotional expression or avolition).
- B. For a significant portion of the time since the onset of the disturbance, level of functioning in one or more major areas, such as work, interpersonal relations, or self-care, is markedly below the level achieved prior to the onset (or when the onset is in childhood or adolescence, there is failure to achieve expected level of interpersonal, academic, or occupational functioning).
- C. Continuous signs of the disturbance persist for at least 6 months. This 6-month period must include at least 1 month of symptoms (or less if successfully treated) that meet Criterion
- A (i.e., active-phase symptoms) and may include periods of prodromal or residual symptoms. During these prodromal or residual periods, the signs of the disturbance may be manifested by only negative symptoms or by two or more symptoms listed in Criterion A present in an attenuated form (e.g., odd beliefs, unusual perceptual experiences).
- D. Schizoaffective disorder and depressive or bipolar disorder with psychotic features have been ruled out because either 1) no major depressive or manic episodes have occurred concurrently with the active-phase symptoms, or 2) if mood episodes have occurred during active-phase symptoms, they have been present for a minority of the total duration of the active and residual periods of the illness.
- E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition.
- F. If there is a history of autism spectrum disorder or a communication disorder of childhood onset, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations, in addition to the other required symptoms of schizophrenia, are also present for at least 1 month (or less if successfully treated).


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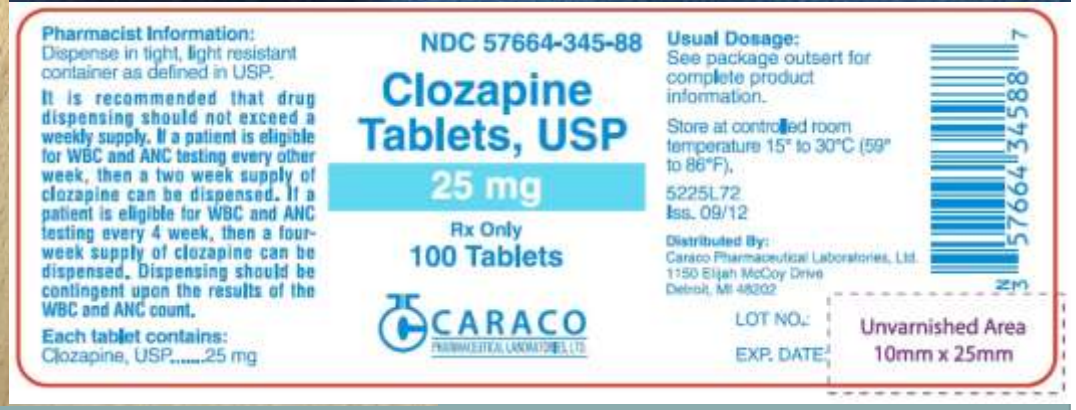
Antipsychotic Pharmacotherapy



Antipsychotic Pharmacotherapy

- **First-generation antipsychotics**
- **Haloperidol** (Haldol, Serenace)
- **Droperidol** (Droleptan, Inapsine)
- **Chlorpromazine** (Thorazine, Largactil)
- **Fluphenazine** (Prolixin) – Available in decanoate (long-acting) form
- **Perphenazine** (Trilafon)
- **Prochlorperazine** (Compazine)
- **Thioridazine** (Mellaril)
- **Trifluoperazine** (Stelazine)
- **Mesoridazine** (Serentil)
- **Periciazine**
- **Promazine**
- **Triflupromazine** (Vesprin)
- **Levomepromazine** (Nozinan)
- **Promethazine** (Phenergan)
- **Pimozide** (Orap)
- **Cyamemazine** (Tercian)

- **Second-generation antipsychotics (**Atypical)
- **Clozapine** (Clozaril)
- **Olanzapine** (Zyprexa
- **Risperidone** (Risperdal)
- **Quetiapine** (Seroquel)
- **Ziprasidone** (Geodon)
- **Amisulpride** (Solian)
- **Asenapine** (Saphris)
- **Paliperidone** (Invega)
- **Iloperidone** (Fanapt, Fanapta)
- **Zotepine** (Nipolept, Losizopilon, Lodopin, Setous)
- **Sertindole** (Serdolect)
- **Lurasidone** (Latuda)

- **Third-generation antipsychotics**
  Aripiprazole (Abilify)

Clozapine

- **Not a first-line choice due to side effects but seen to be effective in the treatment of treatment-resistant schizophrenia**
- Hypersalivation – (sialorrhea)
- Anticholinergic activity
- Myocarditis Myocarditis or inflammatory cardiomyopathy is inflammation of heart muscle (myocardium).*
- Tachychardia
- Weight gain and diabetes
- Agranulocytosis
- Postural / orthostatic potension (dizziness)
- Constipation
- Seizures

- Symptoms associated with myocarditis are varied, and relate either to the actual inflammation of the myocardium, or the weakness of the heart muscle that is secondary to the inflammation:
- Chest pain (often described as "stabbing" in character)
- Congestive heart failure (leading to edema, breathlessness and hepatic congestion)
- Palpitations (due to arrhythmias)
- Sudden death (in young adults, myocarditis causes up to 20% of all cases of sudden death)
- Fever

Anticholinergic side effects

- Anticholinergics will cause all the *opposite* effects of parasympathomimetics and AChEI's:

- **Eyes:**
- Mydriasis (pupil dilation)
- Dry Eye (no lacrimation)
- Accommodation for far vision
- Increases intra-ocular pressure (bad for glaucoma)

- **Digestive tract:**
- Decreased saliva production (dry mouth)
- Decreased stomach acid production (good for peptic ulcers)
- Decreased peristalsis (constipation; good for diarrhea)

- **Other effects:**
- Increased heart rate (good for cardiac insufficiency)
- Bronchodilation (good for asthmatics)
- Urinary retention (good for benign prostatic hyperplasia; large prostate)
- Again, all these are sympathetic-like effects from acetylcholine not being able to stimulate the muscarinic receptor in the parasympathetic fibers.

- **Anticholinergic Order of Sensitivity**
- Secretory (saliva, sweat, stomach acid)
- Eye
- Heart
- GI Motility

Tardive dyskinesia – or TD – is a neurological disorder resulting in involuntary, repetitive body movements.

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9) Eating Disorders

Anorexia Nervosa / Bulimia Nervosa

- **Diagnostic Criteria for Anorexia Nervosa**
- A. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health. Significantly low weight is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected.
- B. Intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain, even though at a significantly low weight.
- C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.

]

- Coding note: The ICD-9-CM code for anorexia nervosa is 307.1, which is assigned regardless of the subtype. The ICD-10-CM code depends on the subtype (see below). Specify whether:
- (F50.01) Restricting type: During the last 3 months, the individual has not engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas). This subtype describes presentations in which weight loss is accomplished primarily through dieting, fasting, and/or excessive exercise.
- (F50.02) Binge-eating/purging type: During the last 3 months, the individual has engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas).

- Specify if:
- In partial remission: After full criteria for anorexia nervosa were previously met. Criterion
- A (low body weight) has not been met for a sustained period, but either Criterion
- B (intense fear of gaining weight or becoming fat or behavior that interferes with weight gain) or Criterion C (disturbances in self-perception of weight and shape) is still met. In full remission: After full criteria for anorexia nervosa were previously met, none of the criteria have been met for a sustained period of time.
- Specify current severity:
- The minimum level of severity is based, for adults, on current body mass index (BMI) (see below) or, for children and adolescents, on BMI percentile. The ranges below are derived from World Health Organization categories for thinness in adults; for children and adolescents, corresponding BMI percentiles should be used. The level of severity may be increased to reflect clinical symptoms, the degree of functional disability, and the need for supervision.

- Mild: BMI>17kg/m2
- Moderate: BM116-16.99 kg/m2
- Severe: BM115-15.99 kg/m2
- Extreme: BMI < 15 kg/m2

Anorexia Nervosa / Bulimia Nervosa

- **Diagnostic Criteria for Bulimia Nervosa**
- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
- 1. Eating, in a discrete period of time (e.g., within any 2-hour period), an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances.
- 2. A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).
- B. Recurrent inappropriate compensatory behaviors in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, or other medications; fasting; or excessive exercise.
- C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months.
- D. Self-evaluation is unduly influenced by body shape and weight.
- E. The disturbance does not occur exclusively during episodes of anorexia nervosa.

- Specify if:
- In partial remission: After full criteria for bulimia nervosa were previously met, some, but not all, of the criteria have been met for a sustained period of time.
- In full remission: After full criteria for bulimia nervosa were previously met, none of the criteria have been met for a sustained period of time.

- Specify current severity:
- The minimum level of severity is based on the frequency of inappropriate compensatory behaviors (see below). The level of severity may be increased to reflect other symptoms and the degree of functional disability.

- Mild: An average of 1-3 episodes of inappropriate compensatory behaviors per week.

- Moderate: An average of 4-7 episodes of inappropriate compensatory behaviors per week.

- Severe: An average of 8-13 episodes of inappropriate compensatory behaviors per week.

- Extreme: An average of 14 or more episodes of inappropriate compensatory behaviors per week.

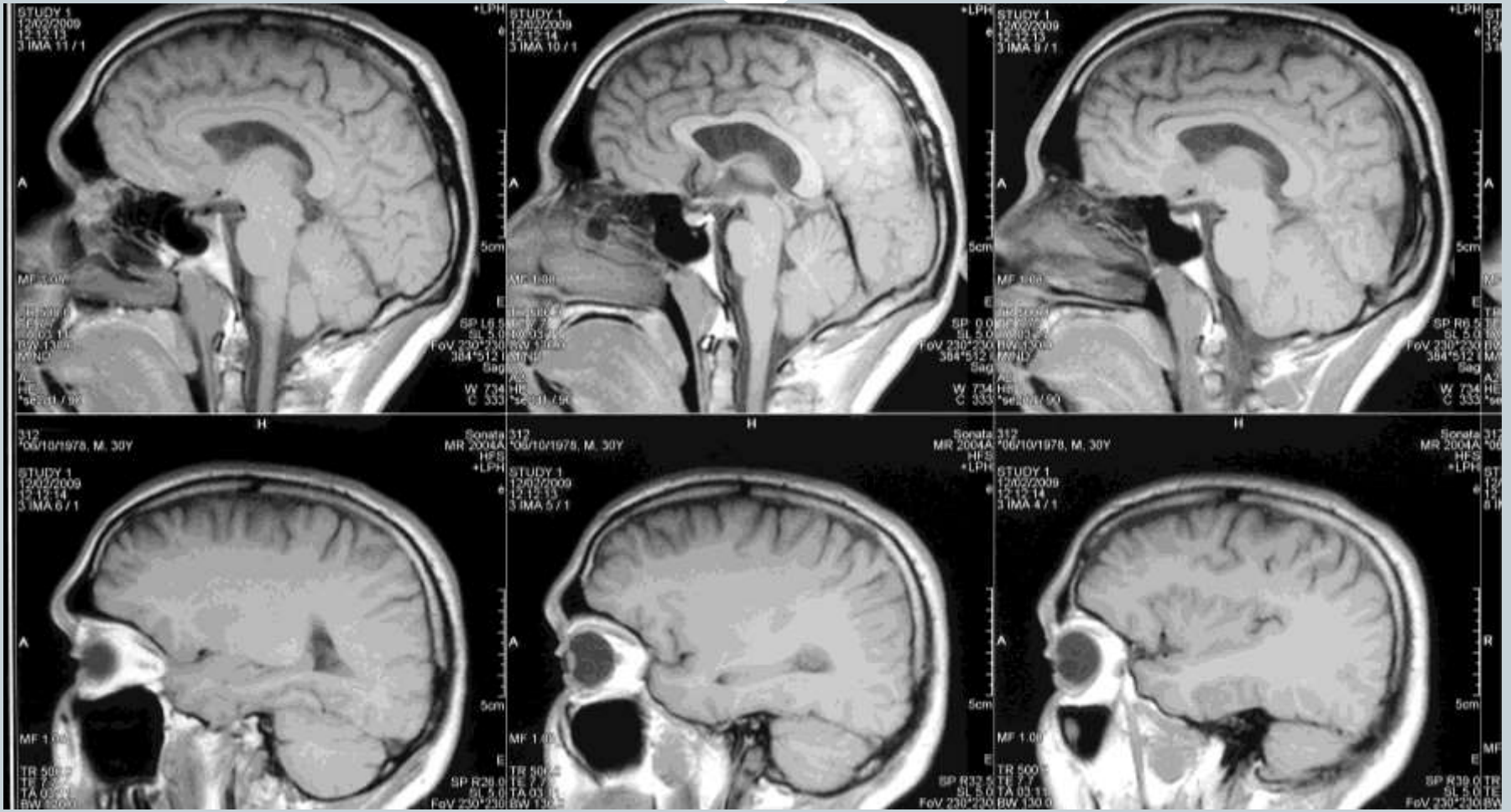
Anorexia Nervosa

Bulimia Nervosa.
Steve's Story

Bulimia Nervosa

Anorexia Nervosa.
Katie's Story

Neurocognitive Disorders



Neurocognitive Disorders

- Neurocognitive Disorder due to Alzheimer's Disease
- Neurocognitive Disorder due to Vascular Disorder
- Neurocognitive Disorder due to Frontotemporal Disorder
- Neurocognitive Disorder due to Lewy Bodies

Neurocognitive Disorders due to Alzheimer's Disease

- **Diagnostic Criteria for major to mild Neurocognitive Disorder due to Alzheimer's Disease**
- A. The criteria are met for major or mild neurocognitive disorder.
- B. There is insidious onset and gradual progression of impairment in one or more cognitive domains (for major neurocognitive disorder, at least two domains must be impaired).
- C. Criteria are met for either probable or possible Alzheimer's disease as follows:
- Probable Alzheimer's disease is diagnosed if either of the following is present; otherwise, possible Alzheimer's disease should be diagnosed.
- 1. Evidence of a causative Alzheimer's disease genetic mutation from family history or genetic testing.
- 2. All three of the following are present:
- a. Clear evidence of decline in memory and learning and at least one other cognitive domain (based on detailed history or serial neuropsychological testing).
- b. Steadily progressive, gradual decline in cognition, without extended plateaus.
- c. No evidence of mixed etiology (i.e., absence of other neurodegenerative or cerebrovascular disease, or another neurological, mental, or systemic disease or condition likely contributing to cognitive decline).

- **For mild neurocognitive disorder:**
- Probable Alzheimer's disease is diagnosed if there is evidence of a causative Alzheimer's disease genetic mutation from either genetic testing or family history.
- Possible Alzheimer's disease is diagnosed if there is no evidence of a causative Alzheimer's disease genetic mutation from either genetic testing or family history, and all three of the following are present:
- 1. Clear evidence of decline in memory and learning.
- 2. Steadily progressive, gradual decline in cognition, without extended plateaus.
- 3. No evidence of mixed etiology (i.e., absence of other neurodegenerative or cerebrovascular disease, or another neurological or systemic disease or condition likely contributing to cognitive decline).
- D. The disturbance is not better explained by cerebrovascular disease, another neurodegenerative disease, the effects of a substance, or another mental, neurological, or systemic disorder.

Neurocognitive Disorders due to Vascular Disorder

- **Diagnostic Criteria for major to mild Vascular Neurocognitive Disorder**
- A. The criteria are met for major or mild neurocognitive disorder.
- B. The clinical features are consistent with a vascular etiology, as suggested by either of the following:
- 1. Onset of the cognitive deficits is temporally related to one or more cerebrovascular events.
- 2. Evidence for decline is prominent in complex attention (including processing speed) and frontal-executive function.
- 0. There is evidence of the presence of cerebrovascular disease from history, physical examination, and/or neuroimaging considered sufficient to account for the neurocognitive deficits.
- D. The symptoms are not better explained by another brain disease or systemic disorder.

- Probable vascular neurocognitive disorder is diagnosed if one of the following is present; otherwise possible vascular neurocognitive disorder should be diagnosed:
- 1. Clinical criteria are supported by neuroimaging evidence of significant parenchymal injury attributed to cerebrovascular disease (neuroimaging-supported).
- 2. The neurocognitive syndrome is temporally related to one or more documented cerebrovascular events.
- 3. Both clinical and genetic (e.g., cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy) evidence of cerebrovascular disease is present.

Neurocognitive Disorders due to Lewy Bodies

- **Diagnostic Criteria for major to mild Neurocognitive Disorder with Lewy Bodies**
- A. The criteria are met for major or mild neurocognitive disorder.
- B. The disorder has an insidious onset and gradual progression.
- C. The disorder meets a combination of core diagnostic features and suggestive diagnostic features for either probable or possible neurocognitive disorder with Lewy bodies. For probable major or mild neurocognitive disorder with Lewy bodies, the individual has two core features, or one suggestive feature with one or more core features.
- For possible major or mild neurocognitive disorder with Lewy bodies, the individual has only one core feature, or one or more suggestive features.
- 1. Core diagnostic features:
- a. Fluctuating cognition with pronounced variations in attention and alertness.
- b. Recurrent visual hallucinations that are well formed and detailed.
- c. Spontaneous features of parkinsonism, with onset subsequent to the development of cognitive decline.
- 2. Suggestive diagnostic features;
- a. Meets criteria for rapid eye movement sleep behavior disorder.
- b. Severe neuroleptic sensitivity.
- D. The disturbance is not better explained by cerebrovascular disease, another neurodegenerative disease, the effects of a substance, or another mental, neurological, or systemic disorder.

Neurocognitive Disorders due Frontotemporal Disorder

- **Diagnostic Criteria for major to mild Frontotemporal Neurocognitive Disorder**
- A. The criteria are met for major or mild neurocognitive disorder.
- B. The disturbance has insidious onset and gradual progression.
- C. Either (1) or (2);

- **1. Behavioral variant;**
- a. Three or more of the following behavioral symptoms:
- i. Behavioral disinhibition.
- ii. Apathy or inertia.
- iii. Loss of sympathy or empathy.
- iv. Perseverative, stereotyped or compulsive/ritualistic behavior.
- v. Hyperorality and dietary changes.
- b. Prominent decline in social cognition and/or executive abilities.

- **2. Language variant:**
- a. Prominent decline in language ability, in the form of speech production, word finding, object naming, grammar, or word comprehension.
- D. Relative sparing of learning and memory and perceptual-motor function.
- E. The disturbance is not better explained by cerebrovascular disease, another neurodegenerative disease, the effects of a substance, or another mental, neurological, or systemic disorder.

- Probable frontotemporal neurocognitive disorder is diagnosed if either of the following is present; otherwise, possible frontotemporal neurocognitive disorder should be diagnosed:
- 1. Evidence of a causative frontotemporal neurocognitive disorder genetic mutation, from either family history or genetic testing.
- 2. Evidence of disproportionate frontal and/or temporal lobe involvement from neuroimaging.
- Possible frontotemporal neurocognitive disorder is diagnosed if there is no evidence of a genetic mutation, and neuroimaging has not been performed.

Neurocognitive Disorders due Frontotemporal Disorder

- **Diagnostic Criteria for major to mild Frontotemporal Neurocognitive Disorder**
- A. The criteria are met for major or mild neurocognitive disorder.
- B. The disturbance has insidious onset and gradual progression.
- C. Either (1) or (2);

- **1. Behavioral variant;**
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- **2. Language variant:**
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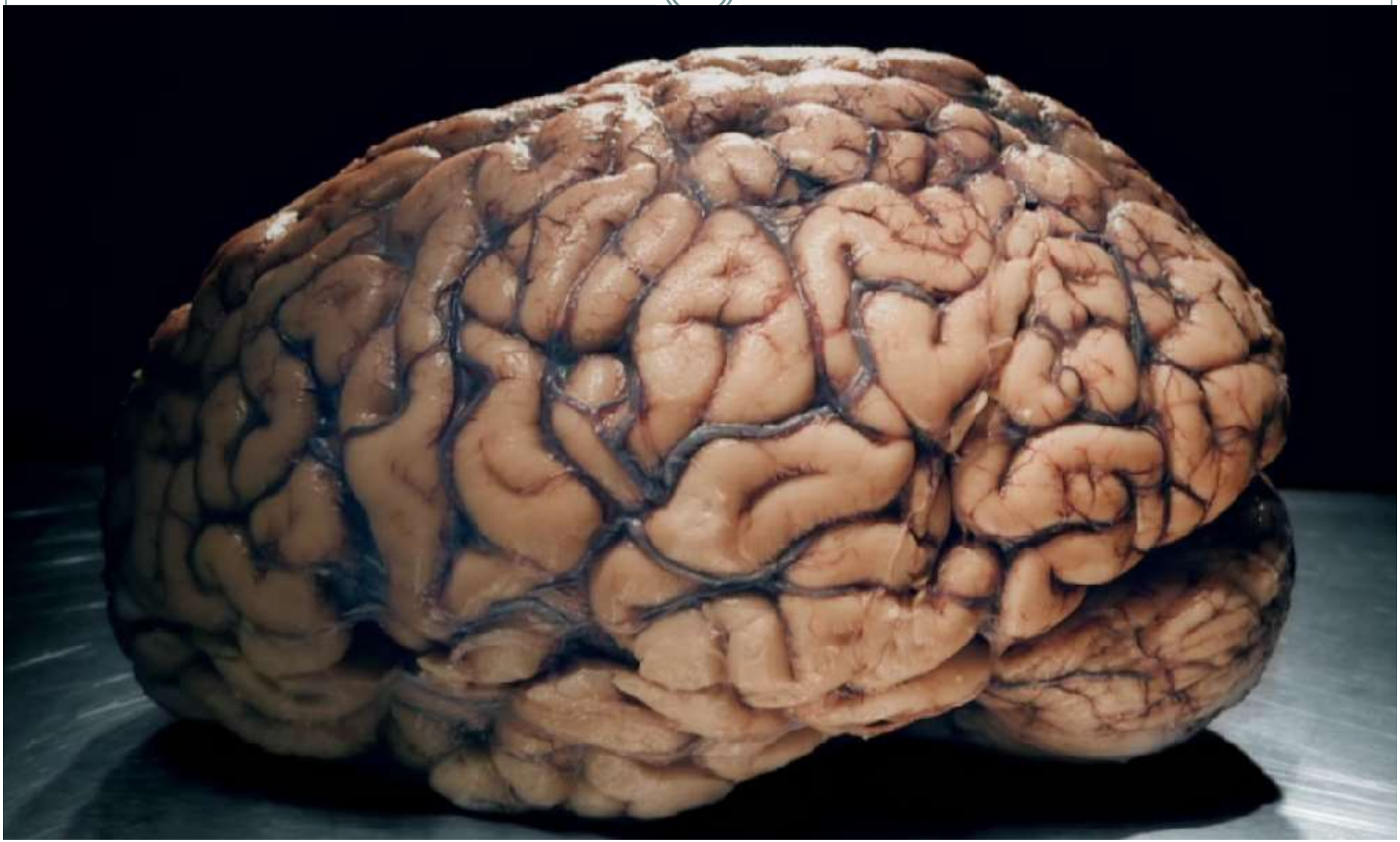
Neurocognitive Disorders

- **Amnesia** (memory Impairment):
- **Aphasia** (impaired comprehension, naming, reading, writing).
- **Apraxia** (cannot perform certain movements on command or imitation -- dressing, using scissors)
- **Agnosia** (cannot recognize objects: pen, watch).
- **Ataxia** (symptom characterised by imbalance, wide-based gait)
- Disturbance in **executive functioning**

Neurocognitive Disorders



Brain imaging studies in PNES-related disorders and vulnerability traits.

- **Conversion paralysis –**
- Decreased CBF in motor areas responsible for deficit110,111 and decreased activity in motor areas during motor task115 and during movement observation.113
- Excessive activity in OFC and ACC during motor task111; excessive metabolism in right OFC compared to feigners during motor task116; decreased activity of right
- OFC compared to feigners during motor task115 and compared to feigners during no-go trials114; increased activation of left inferior frontal gyrus compared to
- feigners during motor task.115
- Decreased activity in DLPFC112 and compared to feigners during motor task.115
- Increased activity in bilateral putamen115 and increased metabolism in left putamen116 and left thalamus116 compared to feigners during motor task.
- Enhanced functional connectivity between motor-related areas and brain regions responsible for emotion processing114,118 and self-representation114 during
- motor task.
- **Conversion sensory deficit**
- Decreased CBF in contralateral basal ganglia and thalamus119 during sensory task.
- **Psychogenic tremor**
- Decreased activity at right TPJ and lower interaction between sensorimotor cortices and TPJ compared to voluntary tremor.121
- **Dissociative identity disorder**
- Increased activation in dissociated PTSD of right ACC, medial prefrontal cortex, medial frontal gyrus, medial parietal lobe and bilateral inferior frontal gyri after
- traumatic scripts.126
- Decreased CBF in bilateral OFC and superior and medial frontal regions in host states.127
- Activation of somatosensory areas and other areas responsible for negative emotional states in traumatic identity states compared to neutral identity states
- during traumatic scripts.128
- **Dissociative amnesia**
- Increased activation in DLPFC and decreased activation in hippocampus during memory retrieval of dissociated memories compared to nondissociated memories.129
- Decreased metabolism in right inferior frontal gyrus in dissociative amnesia at rest.130
- Activation of amygdala and right inferior frontal gyrus during cued recall of dissociated memories compared to nondissociated memories.131
- **Alexithymia**
- Increased metabolism in sensorimotor cortices and left insula during emotional stimuli compared to controls.132
- Decreased metabolism in ACC during emotional stimuli compared to controls.132
- Negative correlation with amygdala activation during emotional stimulation.133,134
- **Avoidance tendencies**
- Increased amygdala activation when confronted with threatening stimuli136; level of activation correlates with avoidance behaviors.135
- **Hypervigilance and somatization**
- Activation of insula and dorsal ACC correlates with interoceptive heartbeat sensitivity.137
- Increased activation in dorsal and rostral ACC, left amygdala and posterior parietal regions during threatening stimuli in PTSD compared to controls.138
- Activation of right parietal cortex during interoceptive attention to heartbeat compared to external attention in controls.141
- Activation of insula and ACC during sham mobile phone radiation in somatoform patients compared to controls.143

Common symptoms of conversion disorder

Common symptoms of conversion disorder

Sensory symptoms

Diplopia (Double Vision)
Deafness
Numbness
Blindness
Mutism

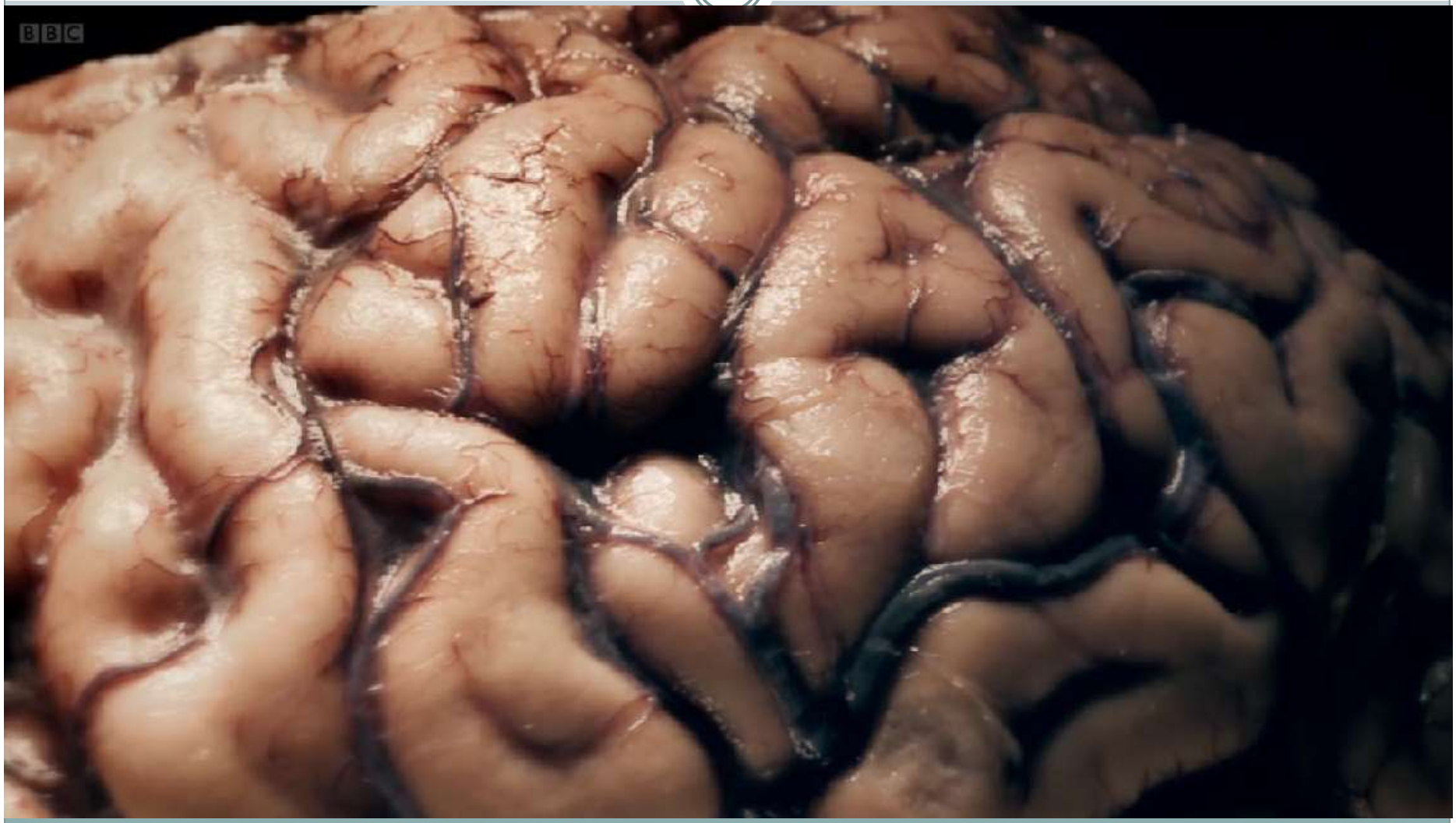
Motor Symptoms

Paralysis
Dysphasia (language disorder marked by deficiency in the generation of speech, and sometimes also in its comprehension, due to brain disease or damage)
Ataxia
Tremor
Aphonia (inability to speak through disease of or damage to the larynx or mouth)
Seizures

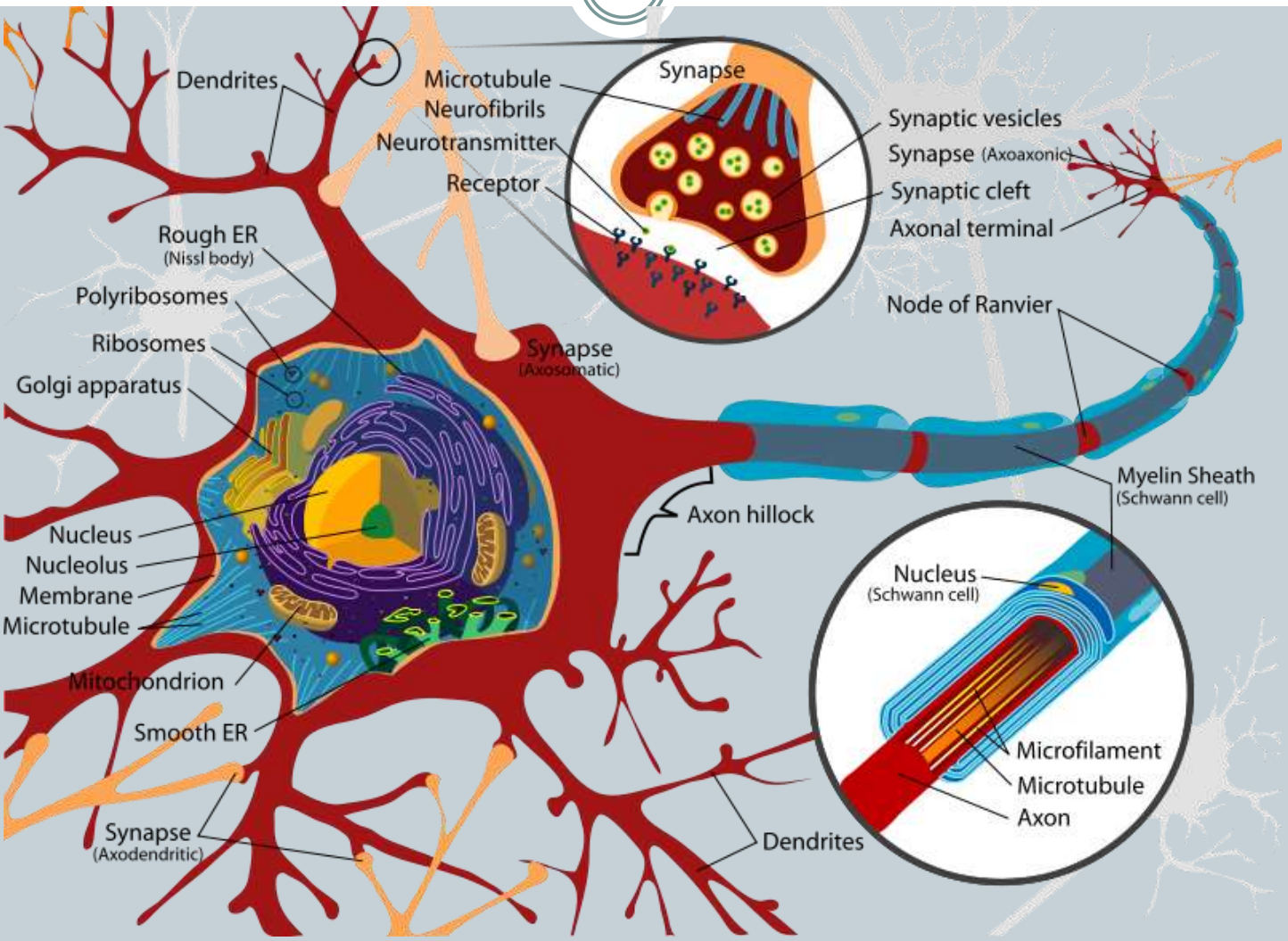
Brain imaging studies in PNES-related disorders and vulnerability traits.

- **Partial (focal) seizure**
- All seizures are caused by abnormal electrical disturbances in the brain. Partial (focal) seizures occur when this electrical activity remains in a limited area of the brain. The seizures can sometimes turn into generalized seizures, which affect the whole brain. This is called secondary generalisation.
- Partial seizures can be divided into:
- **Simple, not affecting awareness or memory**
- **Complex, affecting awareness or memory of events before, during, and immediately after the seizure, and affecting behaviour**
- **Causes**
- Partial seizures are the most common type of seizure in people 1 year and older. In people older than 65 who have blood vessel disease of the brain or brain tumors, partial seizures are very common.
- **Symptoms**
- People with complex partial seizures may or may not remember any or all of the symptoms or events during the seizure.
- Depending on where in the brain the seizure starts, symptoms can include:
- Abnormal muscle contraction, such as abnormal head movements
- Staring spells, sometimes with repetitive movements such as picking at clothes or lip smacking
- Eyes moving from side to side
- Abnormal sensations, such as numbness, tingling, crawling sensation (like ants crawling on the skin)
- Hallucinations, seeing, smelling, or sometimes hearing things that are not there
- Abdominal pain or discomfort
- Nausea
- Sweating
- Flushed face
- Dilated pupils
- Rapid heart rate/pulse
- Other symptoms may include:
- Blackout spells, periods of time lost from memory
- Changes in vision
- Sensation of déjà vu (feeling like current place and time have been experienced before)
- Changes in mood or emotion
- Temporary inability to speak

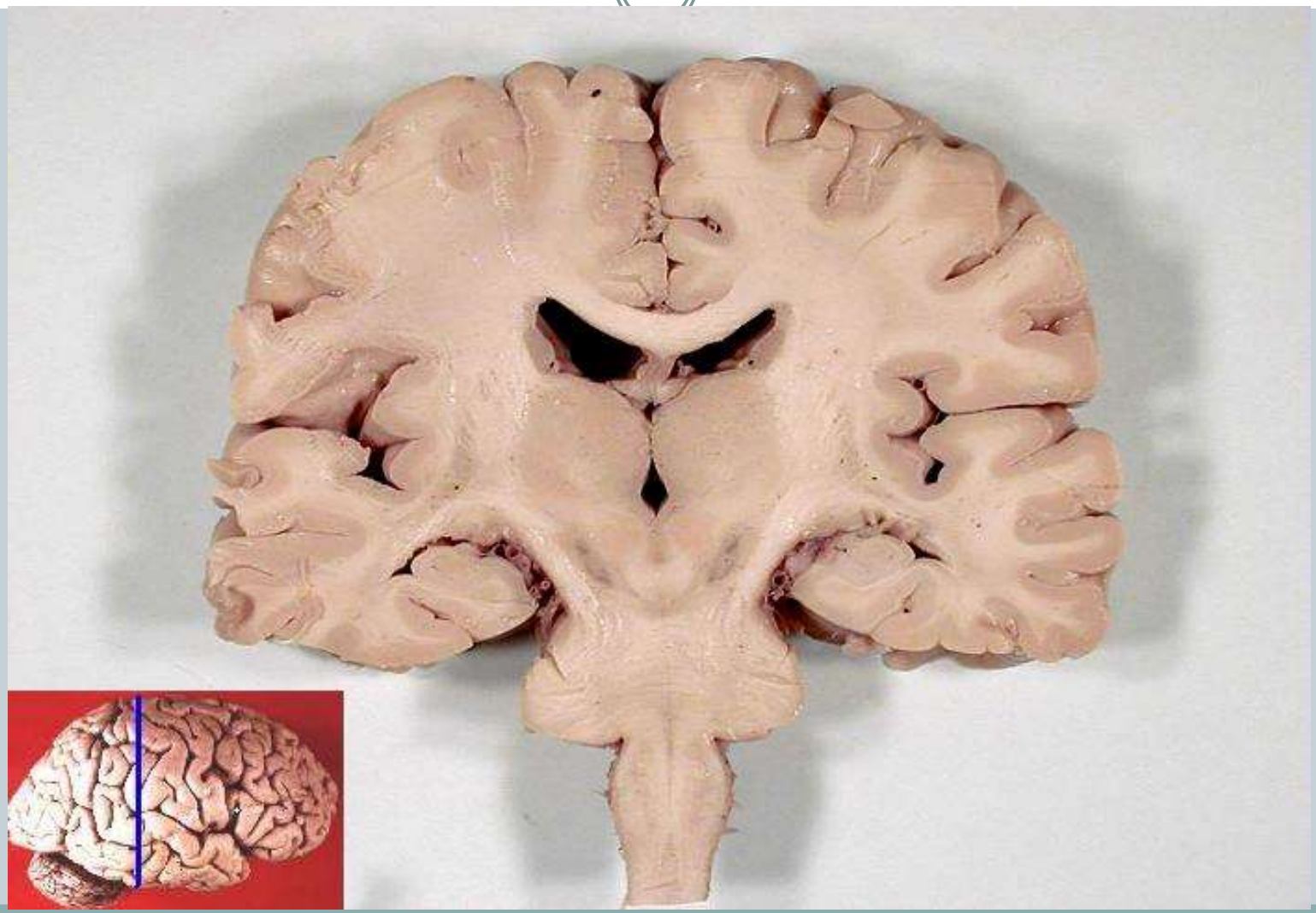
Neurocognitive Disorders



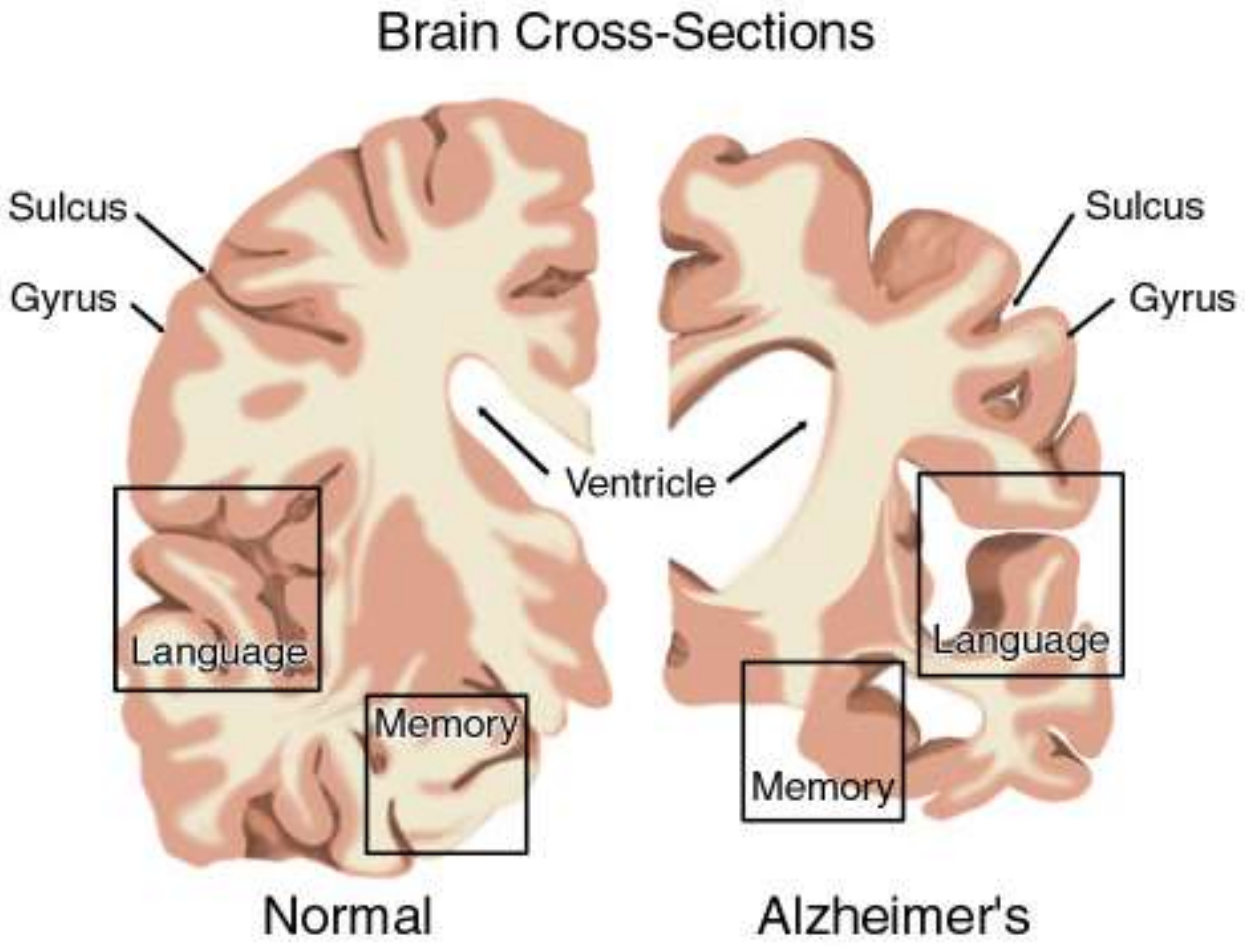
Neurocognitive Disorders



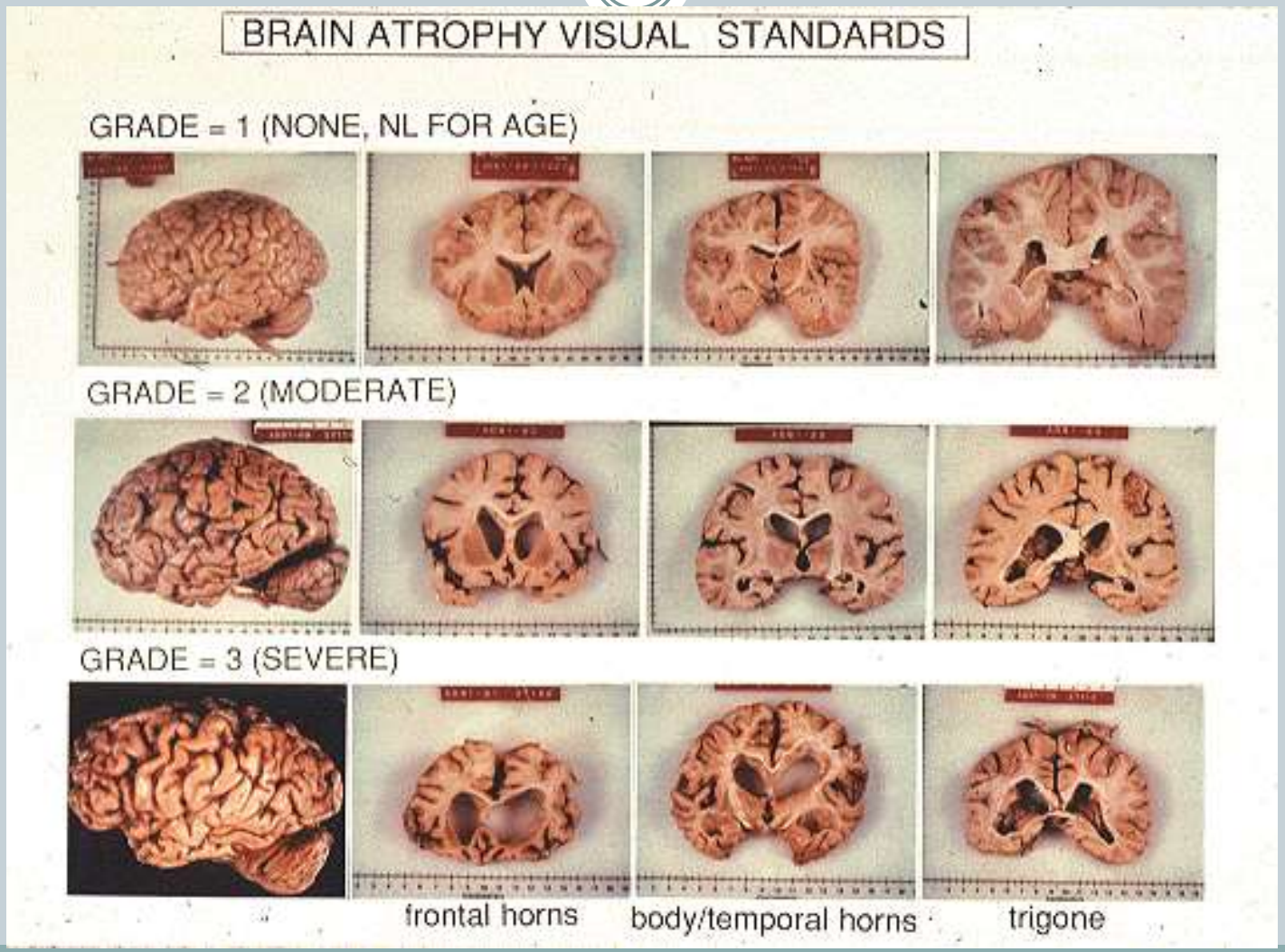
Neurocognitive Disorders



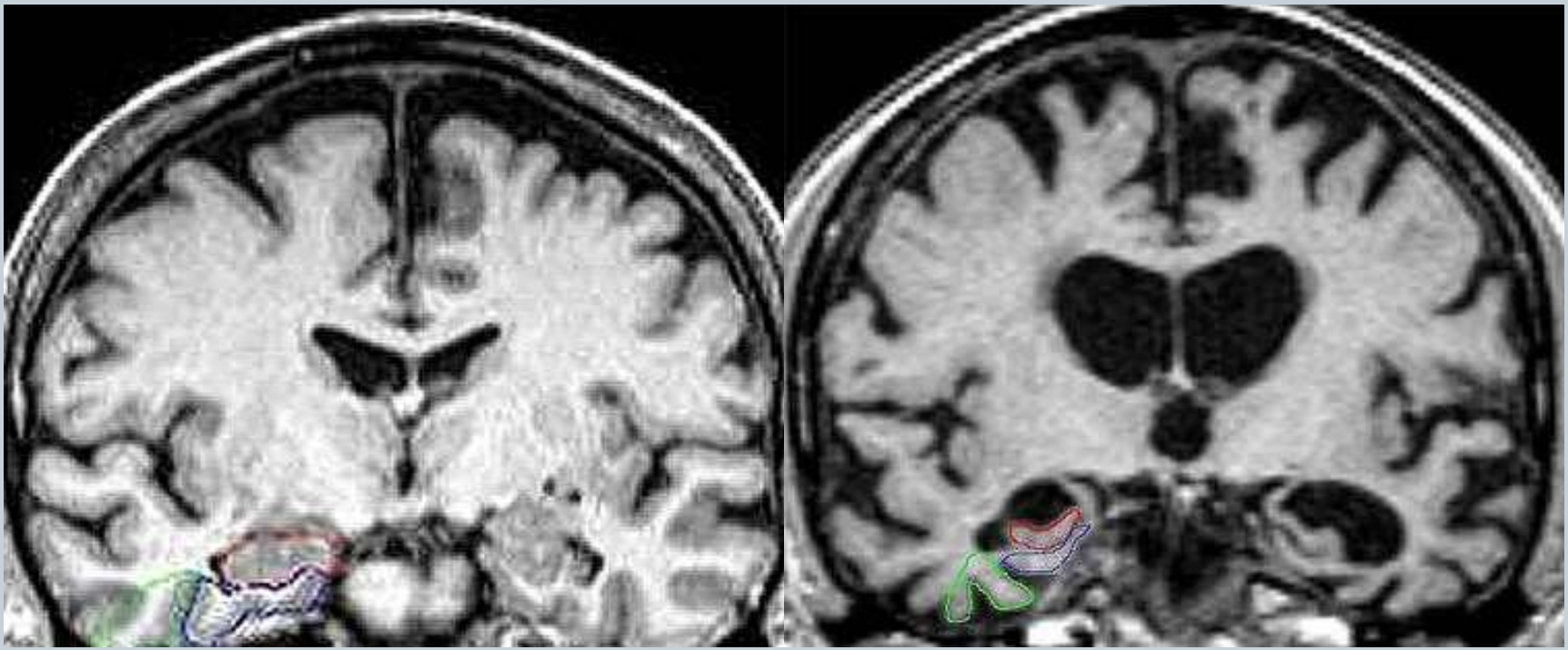
Neurocognitive Disorders due to Alzheimer's Disease



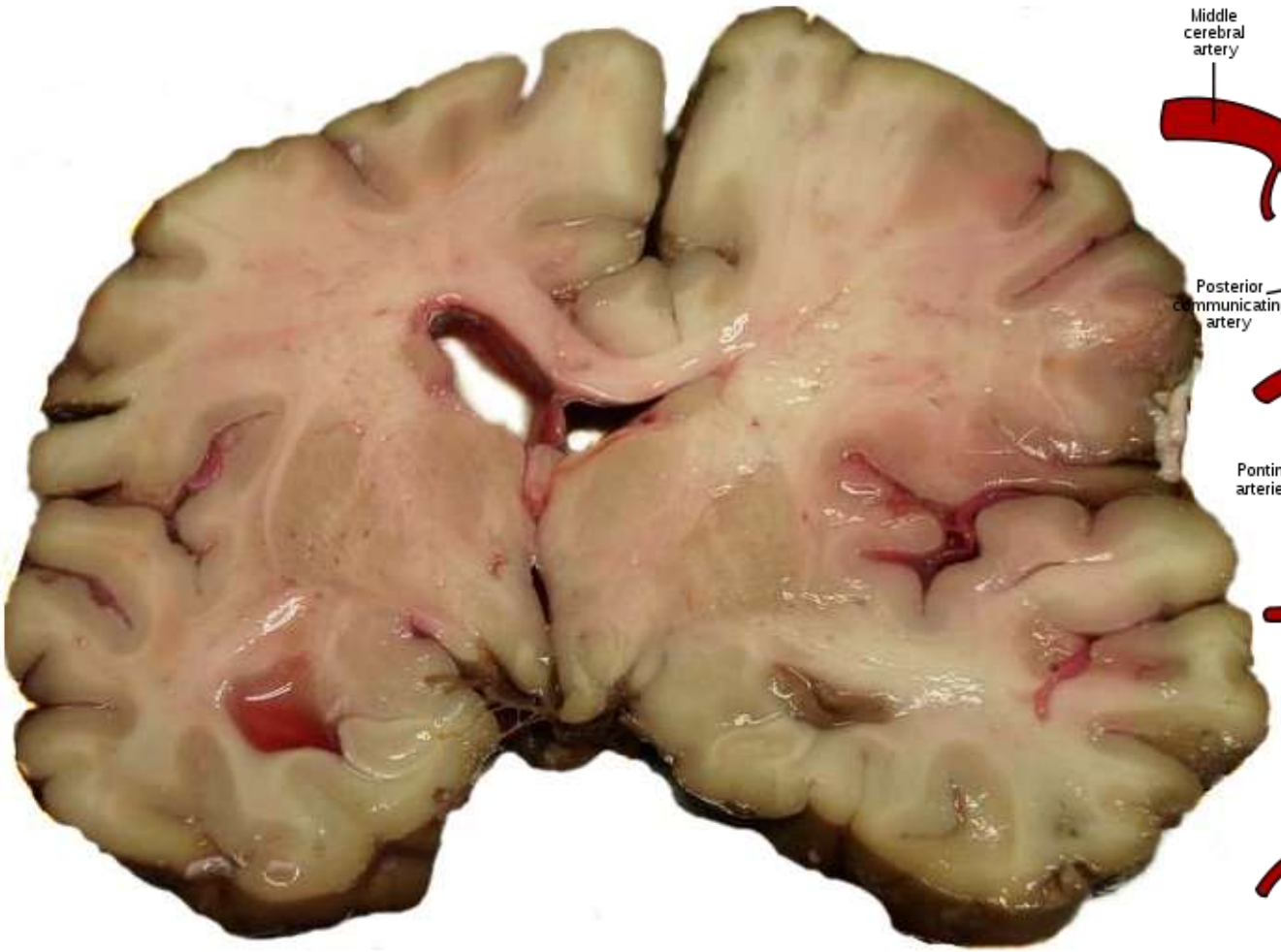
Neurocognitive Disorders due to Alzheimer's Disease

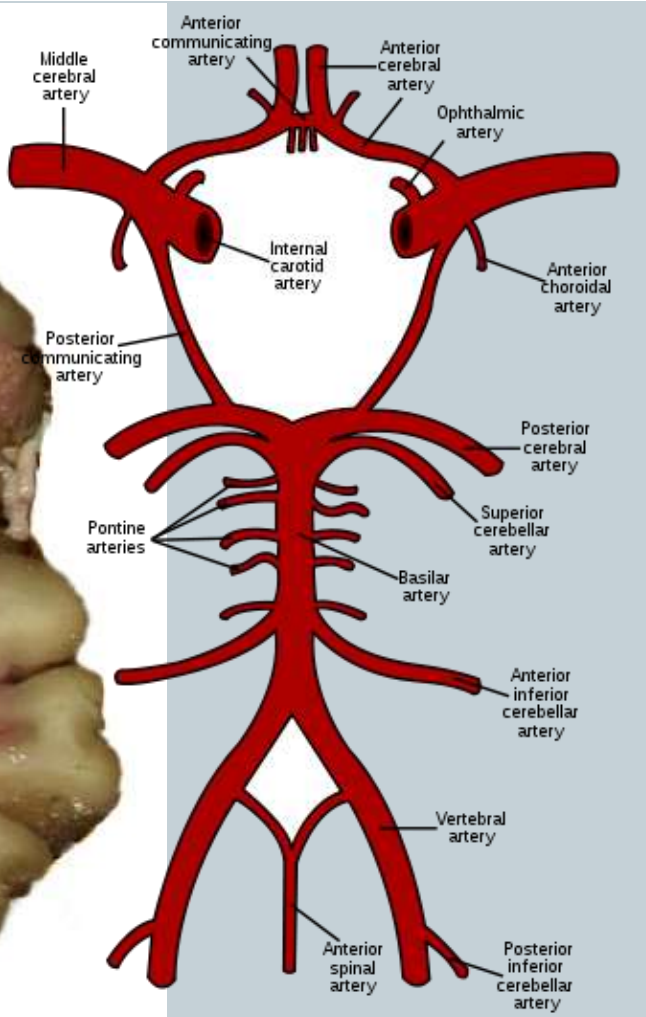


Neurocognitive Disorders due to Alzheimer's Disease



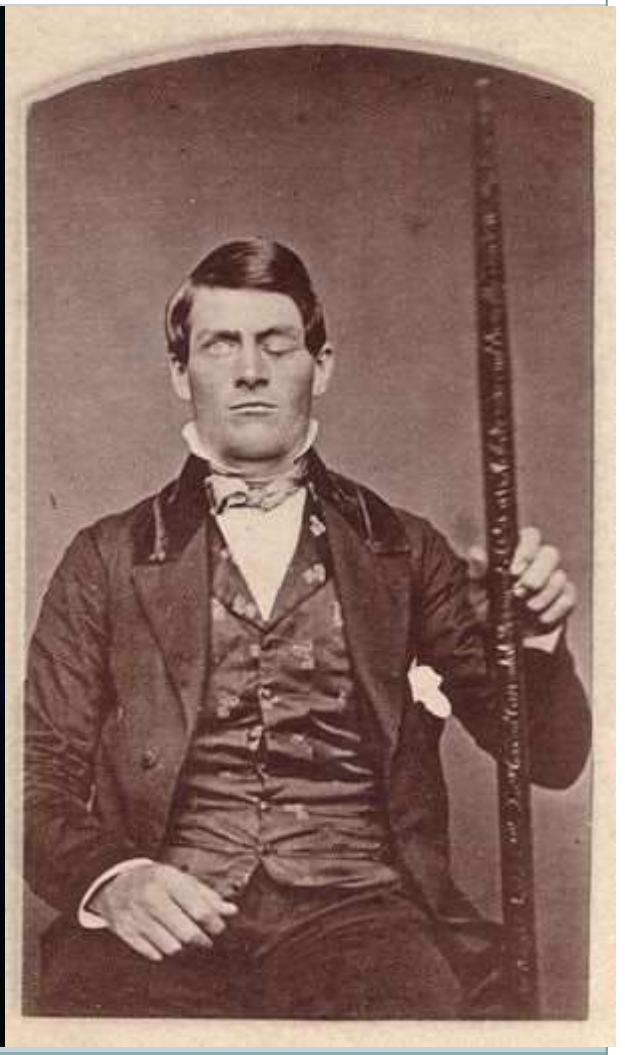
Neurocognitive Disorders due to Vascular Disorder






Ischemic & hemorragic Strokes

Phineas Gage



Phineas Gage

- *"The equilibrium or balance, so to speak, between his intellectual faculties and animal propensities, seems to have been destroyed. He is fitful, irreverent, indulging at times in the grossest profanity (which was not previously his custom), manifesting but little deference for his fellows, impatient of restraint or advice when it conflicts with his desires, at times pertinaciously obstinate, yet capricious and vacillating, devising many plans of future operations, which are no sooner arranged than they are abandoned in turn for others appearing more feasible. A child in his intellectual capacity and manifestations, he has the animal passions of a strong man. Previous to his injury, although untrained in the schools, he possessed a well-balanced mind, and was looked upon by those who knew him as a shrewd, smart businessman, very energetic and persistent in executing all his plans of operation. In this regard his mind was radically changed, so decidedly that his friends and acquaintances said he was 'no longer Gage."*

Delirium

Delirium

- **Diagnostic Criteria for Delirium**
- A. A disturbance in attention (i.e., reduced ability to direct, focus, sustain, and shift attention)
- and awareness (reduced orientation to the environment).
- B. The disturbance develops over a short period of time (usually hours to a few days), represents a change from baseline attention and awareness, and tends to fluctuate in severity during the course of a day.
- C. An additional disturbance in cognition (e.g., memory deficit, disorientation, language, visuospatial ability, or perception).
- D. The disturbances in Criteria A and C are not better explained by another preexisting, established, or evolving neurocognitive disorder and do not occur in the context of a severely reduced level of arousal, such as coma.
- E. There is evidence from the history, physical examination, or laboratory findings that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal (i.e., due to a drug of abuse or to a medication), or exposure to a toxin, or is due to multiple etiologies.
- Specify whether:
- Substance intoxication delirium: This diagnosis should be made instead of substance intoxication when the symptoms in Criteria A and C predominate in the clinical picture and when they are sufficiently severe to warrant clinical attention.

Personality Disorders

Personality Disorder in the DSM / ICD

- A personality disorder is an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment.
- The following personality disorders are included in the DSM
- **Paranoid personality disorder** is a pattern of distrust and suspiciousness such that others' motives are interpreted as malevolent.
- **Schizoid personality disorder** is a pattern of detachment from social relationships and a restricted range of emotional expression.
- **Schizotypal personality disorder** is a pattern of acute discomfort in close relationships, cognitive or perceptual distortions, and eccentricities of behavior.
- **Antisocial personality disorder** is a pattern of disregard for, and violation of, the rights of others.
- **Borderline personality disorder** is a pattern of instability in interpersonal relationships, self-image, and affects, and marked impulsivity.
- **Histrionic personality disorder** is a pattern of excessive emotionality and attention seeking.
- **Narcissistic personality disorder** is a pattern of grandiosity, need for admiration, and lack of empathy.
- **Avoidant personality disorder** is a pattern of social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation.
- **Dependent personality disorder** is a pattern of submissive and clinging behavior related to an excessive need to be taken care of.
- **Obsessive-compulsive personality disorder** is a pattern of preoccupation with orderliness, perfectionism, and control.

Personality Disorders

- Borderline Personality Disorder
- Antisocial Personality Disorder
- Paranoid Personality Disorder

Borderline Personality Disorder

- **Diagnostic Criteria for Borderline Personality Disorder**
- A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:
- 1. Frantic efforts to avoid real or imagined abandonment. (Note: Do not include suicidal or self-mutilating behavior covered in Criterion 5.)
- 2. A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.
- 3. Identity disturbance: markedly and persistently unstable self-image or sense of self.
- 4. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating). (Note: Do not include suicidal or selfmutilating behavior covered in Criterion 5.)
- 5. Recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior.
- 6. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
- 7. Chronic feelings of emptiness.
- 8. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).
- 9. Transient, stress-related paranoid ideation or severe dissociative symptoms.

Antisocial Personality Disorder

- **Diagnostic Criteria for Antisocial Personality Disorder**
- A. A pervasive pattern of disregard for and violation of the rights of others, occurring since age 15 years, as indicated by three (or more) of the following:
- 1. Failure to conform to social norms with respect to lawful behaviors, as indicated by repeatedly performing acts that are grounds for arrest.
- 2. Deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure.
- 3. Impulsivity or failure to plan ahead.
- 4. Irritability and aggressiveness, as indicated by repeated physical fights or assaults.
- 5. Reckless disregard for safety of self or others.
- 6. Consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations.
- 7. Lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another.
- B. The individual is at least age 18 years.
- C. There is evidence of conduct disorder with onset before age 15 years.
- D. The occurrence of antisocial behavior is not exclusively during the course of schizophrenia or bipolar disorder.

Paranoid Personality Disorder

- **Diagnostic Criteria for Paranoid Personality Disorder**
- A. A pervasive distrust and suspiciousness of others such that their motives are interpreted as malevolent, beginning by early adulthood and present in a variety of contexts, as indicated by four (or more) of the following:
- 1. Suspects, without sufficient basis, that others are exploiting, harming, or deceiving him or her.
- 2. Is preoccupied with unjustified doubts about the loyalty or trustworthiness of friends or associates.
- 3. Is reluctant to confide in others because of unwarranted fear that the information will be used maliciously against him or her.
- 4. Reads hidden demeaning or threatening meanings into benign remarks or events.
- 5. Persistently bears grudges (i.e., is unforgiving of insults, injuries, or slights).
- 6. Perceives attacks on his or her character or reputation that are not apparent to others and is quick to react angrily or to counterattack.
- 7. Has recurrent suspicions, without justification, regarding fidelity of spouse or sexual partner.
- B. Does not occur exclusively during the course of schizophrenia, a bipolar disorder or depressive disorder with psychotic features, or another psychotic disorder and is not attributable to the physiological effects of another medical condition.

- Note: If criteria are met prior to the onset of schizophrenia, add “premorbid,” i.e., “paranoid personality disorder (premorbid).”

Paranoid Personality Disorder

- Mistrustful: Reluctant to presume others' goodwill.
- Suspicious: Scrutinizes the actions of others for any hint of malevolent or selfish motive.
- Vigilant: Actively scans surroundings and inspects interactions for signs of danger.
- Cynical: Believes positive expectations will be spoiled, that human nature is inherently
- selfish, and that the universe is unjust.
- Rivalrous: Actively engages in social comparison.
- Wronged: Views self as innocent victim of injustice. Sees self at short end of social comparisons.
- Jealous: Questions the loyalty of intimate associates, including spouse.
- Thin-Skinned Hypersensitive to perceived slights. Easily enraged by narcissistic injury.
- Seething: Recounts past wrongs while boiling with anger.
- Revengeful: Determined to "balance the books," through own action, if necessary.
- Guarded: Maintains self-protective posture. Indiscriminately secretive and evasive.
- Convicted: Impervious to correction by new information or information inconsistent with previous views.
- Humourless: Takes everything seriously. Especially unable to laugh at self. Brittle.
- Self-Contained: Impervious to correction based on the advice of others.
- Self-Important: Believes own experience has special significance. Personalizes neutral events.

Adverse Childhood Experience Study (ACE)


Actors are used to protect identities

Adverse Childhood Experience Study (ACE)

- **Key Hypothesis of Study**
- Childhood Traumas lead to a wide array of negative and social consequences
- Stressful, or traumatic experiences negatively affect childhood development that set the stage for later problems
- Study found a strong relationship between ACE score and psychiatric disorders in later life

- **Summary of findings of the ACE Study**

- Difficulties with……
- Cognitive Problems
- Psychiatric Disorder
- Relationship Problems
- Affective Problems
- Family Problems
- Traumatic Behaviour Problems
- Somatic Problems

- Alcohol Abuse
- Sexual Promiscuity
- Using Psychoactive materials and illicit Drug Use
- Over eating/ Eating Disorders
- Delinquent Behaviour

Adverse Childhood Experience Study (ACE)

Participants surveyed on 9 types of adverse childhood experiences

1. Recurrent physical abuse
2. Recurrent emotional abuse
3. Contact sexual abuse
4. An alcohol and/or drug abuser in the household
5. An incarcerated household member
6. Someone who is chronically depressed, mentally ill, institutionalized, or suicidal
7. Mother is treated violently
8. One or no parents
9. Emotional or physical neglect

- Decade long study carried out by Kaiser Permanente, San Diego, CA
- 17,421 adult cohort

Adverse Childhood Experience Study (ACE)

- While you were growing up, during your first 18 years of life:

- 1. Did a parent or other adult in the household often or very often…
- Swear at you, insult you, put you down, or humiliate you? Or Act in a way that made you afraid that you might be physically hurt?
- Yes / No If yes enter 1 _____

- 2. Did a parent or other adult in the household often or very often…
- Push, grab, slap, or throw something at you? Or Ever hit you so hard that you had marks or were injured?
- Yes / No If yes enter 1 _____

Adverse Childhood Experience Study (ACE)

- 3. Did an adult or person at least 5 years older than you ever…
- Touch or fondle you or have you touch their body in a sexual way? Or Attempt or actually have oral, anal, or vaginal intercourse with you?
- Yes / No If yes enter 1 _____

- 4. Did you often or very often feel that …
- No one in your family loved you or thought you were important or special? Or your family didn't look out for each other, feel close to each other, or support each other?
- Yes / No If yes enter 1 _____

Adverse Childhood Experience Study (ACE)

- 5. Did you often or very often feel that …
- You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? Or your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
- Yes / No If yes enter 1 _____

- 6. Were your parents ever separated or divorced?
- Yes / No If yes enter 1 _____

Adverse Childhood Experience Study (ACE)

- 7. Was your mother or stepmother:
- Often or very often pushed, grabbed, slapped, or had something thrown at her? Or sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? Or ever repeatedly hit at least a few minutes or threatened with a gun or knife?
- Yes / No If yes enter 1 _____

- 8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
- Yes / No If yes enter 1 _____

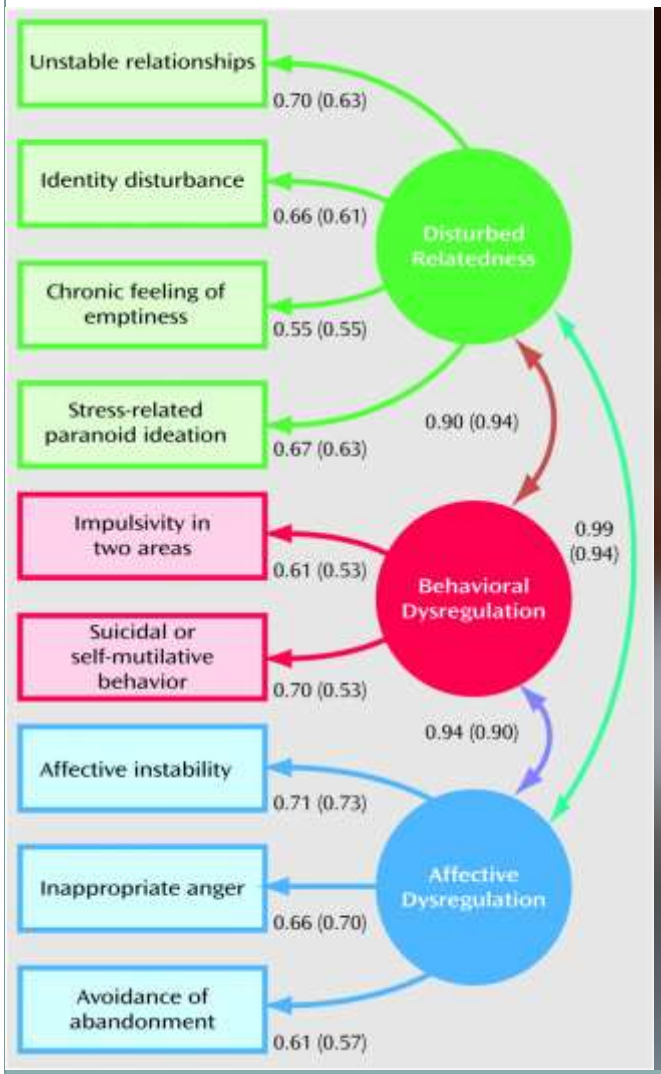
Adverse Childhood Experience Study (ACE)

- 9. Was a household member depressed or mentally ill, or did a household member attempt suicide? Or did a household member go to prison?
- Yes / No If yes enter 1 _____

- Now add up your “Yes” answers: _____

- This is your ACE Score.

Borderline Personality Disorder



Borderline Personality Disorder

- ICD 10 – criteria for Emotionally Unstable Personality Disorder

- **Impulsive type:**
- The predominant characteristics are emotional instability and lack of impulse control. Outbursts of violence or threatening behaviour are common, particularly in response to criticism by others. At least three of the following must be present, one of which must be (2)

1. Marked tendency to act unexpectedly and without consideration of the consequences;
2. Marked tendency to quarrelsome behaviour and to conflicts with others, especially when impulsive acts are thwarted or criticised;
3. Liability to outbursts of anger or violence with inability to control the resulting behavioural explosions;
4. Difficulty in maintaining any course of action that offers no immediate reward;
5. Unstable and capricious mood.

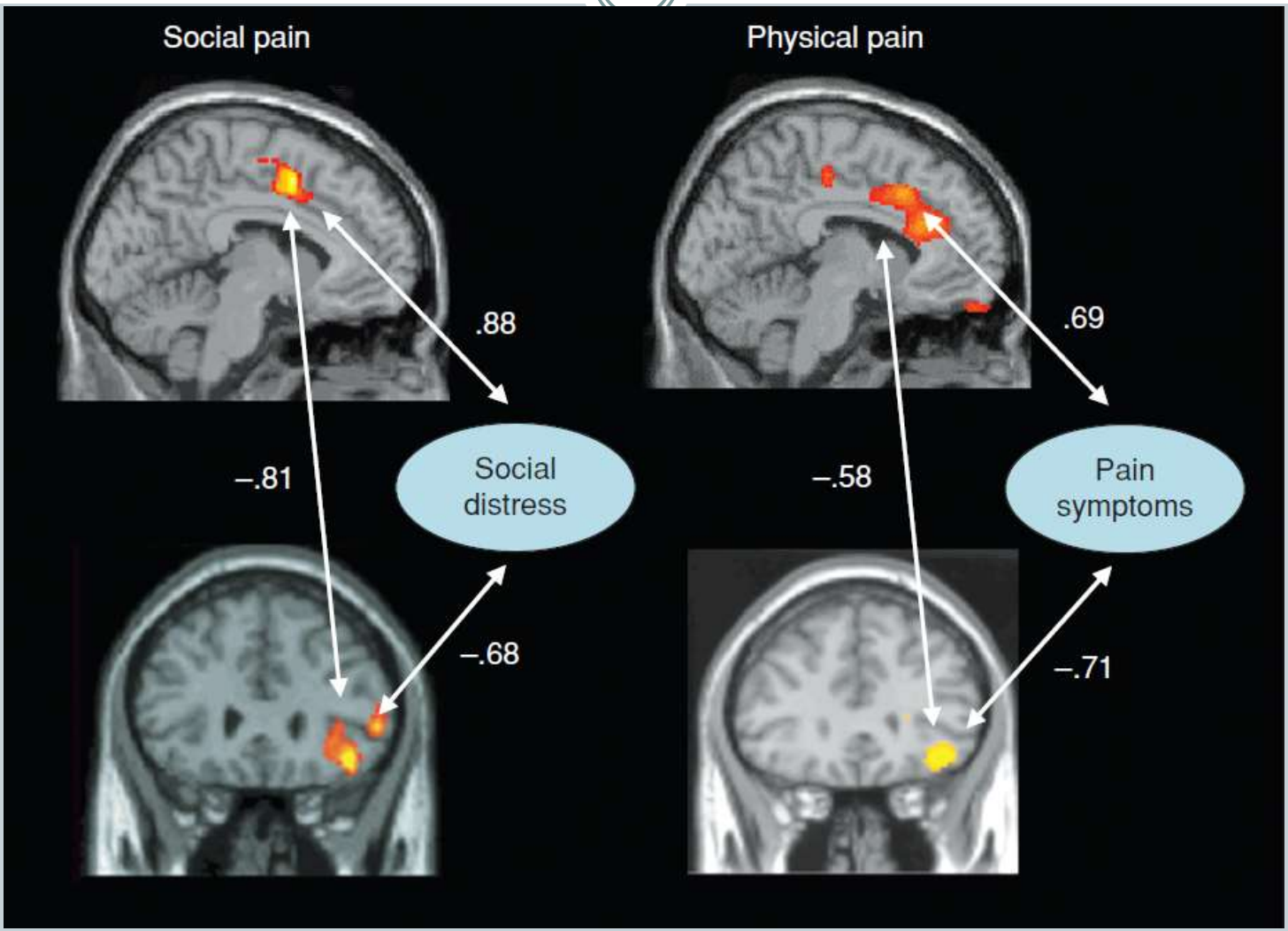
- **Borderline type:**
- At least three of the symptoms mentioned above must be present with at least two of the following in addition:

1. Disturbances in and uncertainty about self-image, aims and internal preferences;
2. Liability to become involved in intense and unstable relationships, often leading to emotional crisis;
3. Excessive efforts to avoid abandonment;
4. Recurrent threats or acts of self harm;
5. Chronic feelings of emptiness;
6. Demonstrates impulsive behaviour, i.e speeding, substance misuse

Borderline Personality Disorder

- Has had a pattern of serious substance abuse.
- Has had a pattern of sexual deviance (i.e., promiscuity or paraphilia).
- Has had a pattern of physical self-mutilation.
- Has had a pattern of manipulative suicide threats, gestures, or attempts
- (i.e., the suicidal efforts were mainly designed to elicit a “saving” response).
- Has had another pattern of impulsive behaviour.
- Has typically tried to avoid being alone or felt extremely dysphoric when alone.
- Has repeatedly experienced fears of abandonment, engulfment, or annihilation.
- Has been strongly counter dependent or seriously conflicted about giving and receiving care.
- Has tended to have intense, unstable close relationships.
- Has had recurrent problems with devaluation, manipulation, or sadism in close relationships.
- Has had recurrent problems with demandingness or entitlement in close relationships.

Social Pain in the brain



Jane is a 41 year old woman who is seeing the liaison psychiatrist following an episode of self harm.

She is unemployed and has recently split from her partner.

comments made to people
when being treated

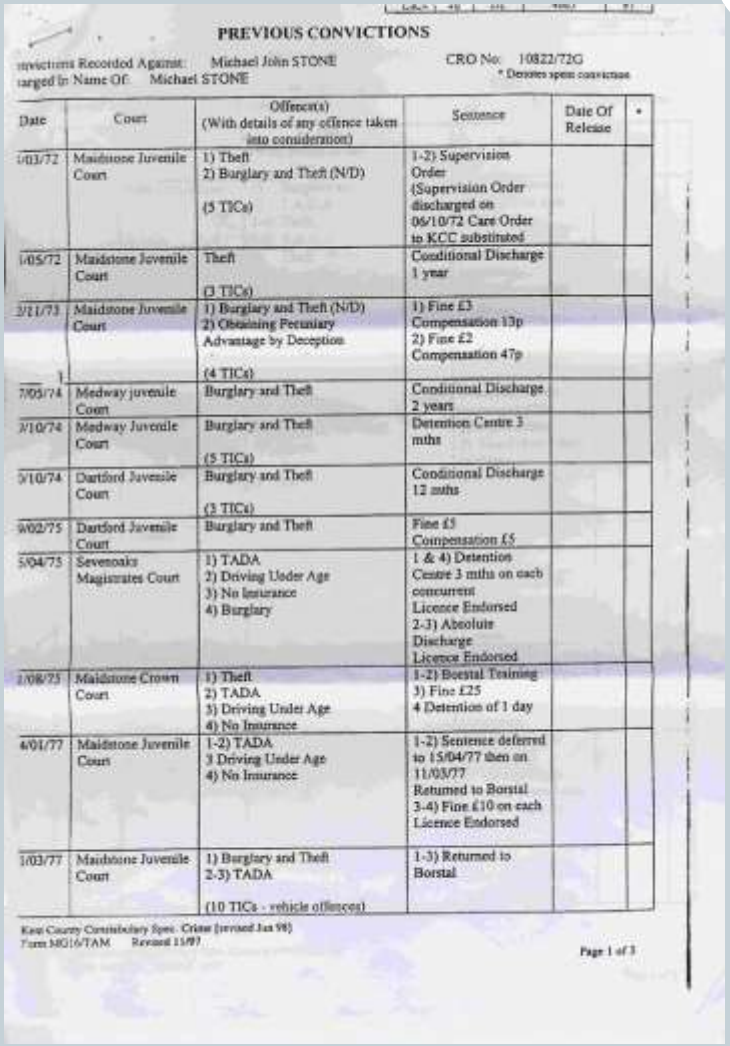
Mental Health Awareness – 22nd December 2016

- **Validation & Dialectic Practice**

- To **validate someone's feelings (and the associated behaviours)** is first to accept **someone's feelings** - and then to understand them by understanding the perspective that is creating them.
- To **validate** is to acknowledge and accept a person, a person's perspective / viewpoint and how this influences their feelings and behaviours.
- Invalidation, on the other hand, is to reject, ignore, or judge all of the above. We commonly do this in an attempt to pursue logic or defend our own viewpoints and feelings.
- Dialectic practice is a conversational style intended to resolve a conflict between two apparently contradictory ideas or statements. Establishing truths and validity on both sides rather that disapproving or disproving one argument

Antisocial Personality Disorder (Forensics)

Antisocial Personality Disorder (Forensics)



PREVIOUS CONVICTIONS

Convictions Recorded Against: Michael John STONE CRO No: 10822/72G
Charged In Name Of: Michael STONE
* Denotes spent conviction

Date	Court	Offence(s) (With details of any offence taken into consideration)	Sentence	Date Of Release	*
1/03/72	Maidstone Juvenile Court	1) Theft 2) Burglary and Theft (N/D) (5 TICs)	1-2) Supervision Order (Supervision Order discharged on 06/10/72 Care Order to KCC substituted		
1/05/72	Maidstone Juvenile Court	Theft (3 TICs)	Conditional Discharge 1 year		
2/11/73	Maidstone Juvenile Court	1) Burglary and Theft (N/D) 2) Obtaining Pecuniary Advantage by Deception (4 TICs)	1) Fine £3 Compensation 13p 2) Fine £2 Compensation 47p		
7/05/74	Medway juvenile Court	Burglary and Theft	Conditional Discharge 2 years		
3/10/74	Medway Juvenile Court	Burglary and Theft (5 TICs)	Detention Centre 3 mths		
5/10/74	Dartford Juvenile Court	Burglary and Theft (3 TICs)	Conditional Discharge 12 mths		
9/02/75	Dartford Juvenile Court	Burglary and Theft	Fine £5 Compensation £5		
5/04/75	Sevenoaks Magistrates Court	1) TADA 2) Driving Under Age 3) No Insurance 4) Burglary	1 & 4) Detention Centre 3 mths on each concurrent Licence Endorsed 2-3) Absolute Discharge Licence Endorsed		
1/08/75	Maidstone Crown Court	1) Theft 2) TADA 3) Driving Under Age 4) No Insurance	1-2) Borstal Training 3) Fine £25 4 Detention of 1 day		
4/01/77	Maidstone Juvenile Court	1-2) TADA 3 Driving Under Age 4) No Insurance	1-2) Sentence deferred to 15/04/77 then on 11/03/77 Returned to Borstal 3-4) Fine £10 on each Licence Endorsed		
1/03/77	Maidstone Juvenile Court	1) Burglary and Theft 2-3) TADA (10 TICs - vehicle offences)	1-3) Returned to Borstal		

Kent County Constabulary Spec. Crime [revised Jan 98]
Form MG16/TAM Revised 11/97

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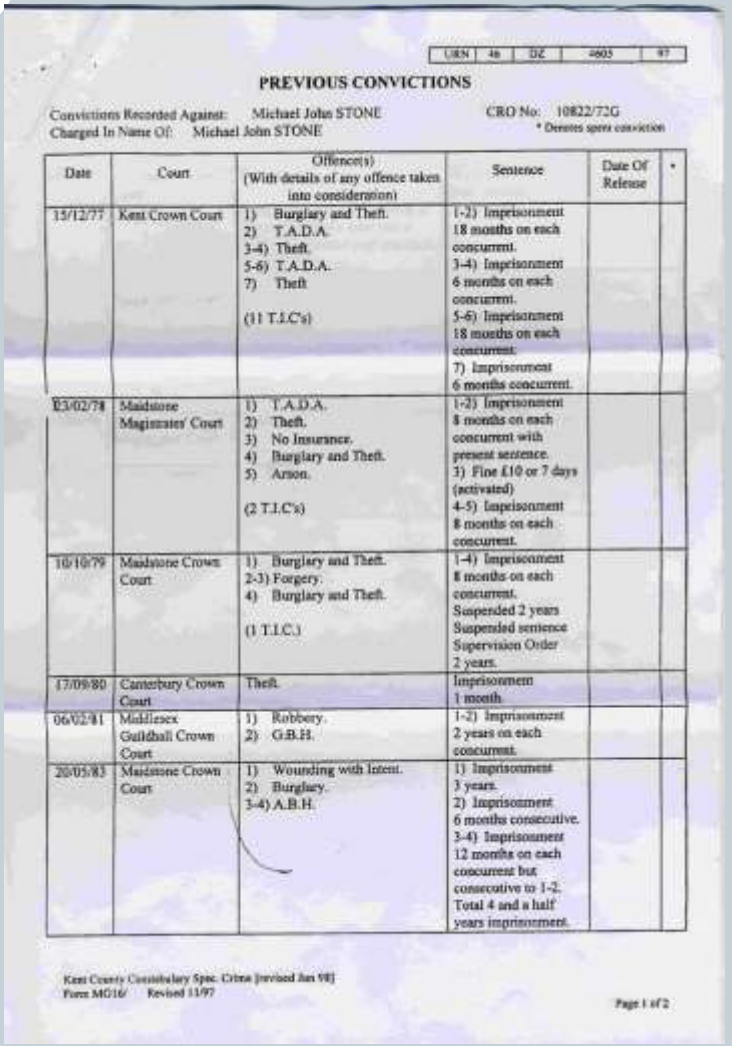

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PREVIOUS CONVICTIONS

Convictions Recorded Against: Michael John STONE CRO No: 10822/72G
Charged In Name Of: Michael John STONE
* Denotes spent conviction

Date	Court	Offence(s) (With details of any offence taken into consideration)	Sentence	Date Of Release	*
15/12/77	Kent Crown Court	1) Burglary and Theft. 2) T.A.D.A. 3-4) Theft. 5-6) T.A.D.A. 7) Theft (11 T.I.C's)	1-2) Imprisonment 18 months on each concurrent. 3-4) Imprisonment 6 months on each concurrent. 5-6) Imprisonment 18 months on each concurrent. 7) Imprisonment 6 months concurrent.		
03/02/78	Maidstone Magistrates' Court	1) T.A.D.A. 2) Theft. 3) No Insurance. 4) Burglary and Theft. 5) Arson. (2 T.I.C's)	1-2) Imprisonment 8 months on each concurrent with present sentence. 3) Fine £10 or 7 days (activated) 4-5) Imprisonment 8 months on each concurrent.		
10/10/79	Maidstone Crown Court	1) Burglary and Theft. 2-3) Forgery. 4) Burglary and Theft. (1 T.I.C.)	1-4) Imprisonment 8 months on each concurrent. Suspended 2 years Suspended sentence Supervision Order 2 years.		
17/09/80	Canterbury Crown Court	Theft.	Imprisonment 1 month		
06/02/81	Middlesex Guildhall Crown Court	1) Robbery. 2) G.B.H.	1-2) Imprisonment 2 years on each concurrent.		
20/05/83	Maidstone Crown Court	1) Wounding with Intent. 2) Burglary. 3-4) A.B.H.	1) Imprisonment 3 years. 2) Imprisonment 6 months consecutive. 3-4) Imprisonment 12 months on each concurrent but consecutive to 1-2. Total 4 and a half years imprisonment.		

Kent County Constabulary Spec. Crime [revised Jan 98]
Form MG16/ Revised 11/97

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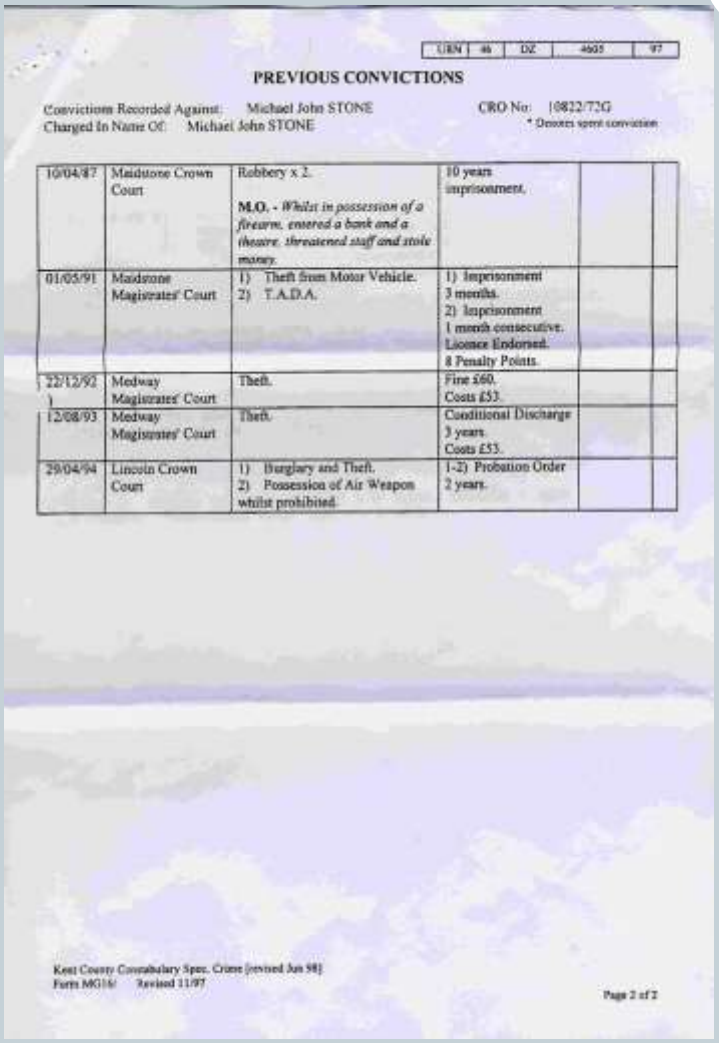
Antisocial Personality Disorder (Forensics)



URN	46	DZ	4605	97

PREVIOUS CONVICTIONS

Convictions Recorded Against: Michael John STONE CRO No: 10812/72G
Charged In Name Of: Michael John STONE
* Denotes spent conviction

10/04/87	Maidstone Crown Court	Robbery x 2. **M.O.** - *Whilst in possession of a firearm, entered a bank and a theatre, threatened staff and stole money.*	10 years imprisonment.		
01/05/91	Maidstone Magistrates' Court	1) Theft from Motor Vehicle. 2) T.A.D.A.	1) Imprisonment 3 months. 2) Imprisonment 1 month consecutive. Licence Endorsed. 8 Penalty Points.		
22/12/92	Medway Magistrates' Court	Theft.	Fine £60. Costs £53.		
12/08/93	Medway Magistrates' Court	Theft.	Conditional Discharge 3 years. Costs £53.		
29/04/94	Lincoln Crown Court	1) Burglary and Theft. 2) Possession of Air Weapon whilst prohibited.	1-2) Probation Order 2 years.		

Kent County Constabulary Spec. Crime [revised Jan 98]
Form MG16 Revised 11/97

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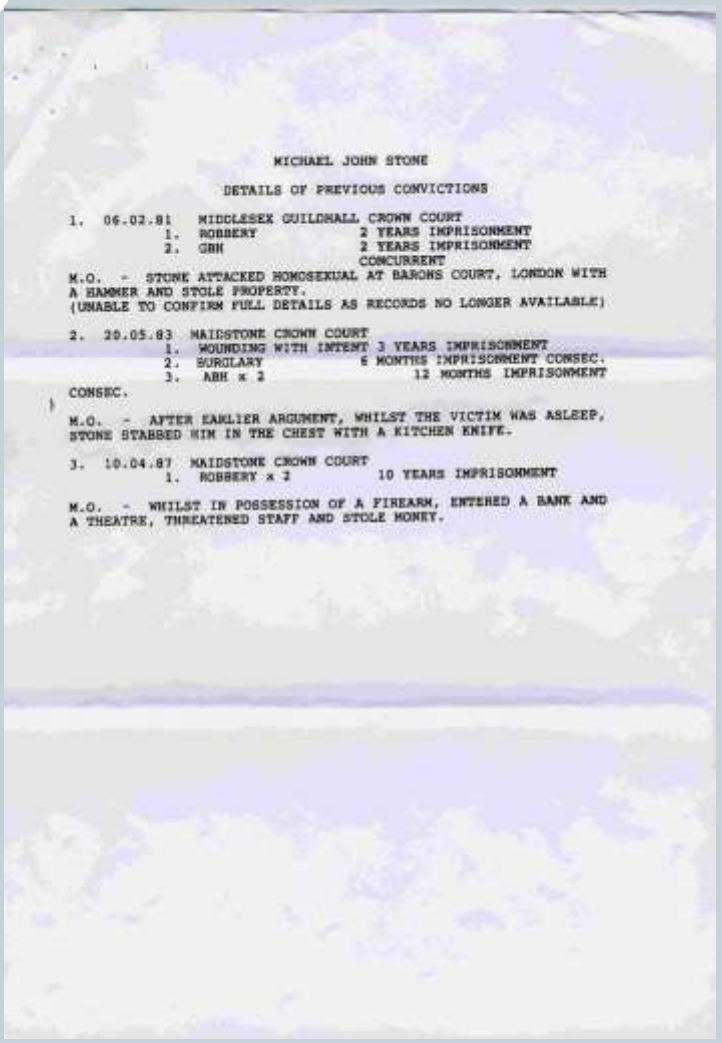

MICHAEL JOHN STONE

DETAILS OF PREVIOUS CONVICTIONS

1. 06.02.81 MIDDLESEX GUILDHALL CROWN COURT
   1. ROBBERY 2 YEARS IMPRISONMENT
   2. GBH 2 YEARS IMPRISONMENT CONCURRENT

M.O. - STONE ATTACKED HOMOSEXUAL AT BARONS COURT, LONDON WITH A HAMMER AND STOLE PROPERTY.
(UNABLE TO CONFIRM FULL DETAILS AS RECORDS NO LONGER AVAILABLE)

2. 20.05.83 MAIDSTONE CROWN COURT
   1. WOUNDING WITH INTENT 3 YEARS IMPRISONMENT
   2. BURGLARY 6 MONTHS IMPRISONMENT CONSEC.
   3. ABH x 2 12 MONTHS IMPRISONMENT CONSEC.

M.O. - AFTER EARLIER ARGUMENT, WHILST THE VICTIM WAS ASLEEP, STONE STABBED HIM IN THE CHEST WITH A KITCHEN KNIFE.

3. 10.04.87 MAIDSTONE CROWN COURT
   1. ROBBERY x 2 10 YEARS IMPRISONMENT

M.O. - WHILST IN POSSESSION OF A FIREARM, ENTERED A BANK AND A THEATRE, THREATENED STAFF AND STOLE MONEY.

Antisocial Personality Disorder (Forensics)

- **Michael Stone report – Psychological Assessment - Forensic Psychiatric Services:**
- Stone was one of five children and suffered domestic violence as a child.
- The young Stone ended up in a children's home in Eastry, near Canterbury, but he was abused and embarked on his teenage years as a confused, frustrated and angry boy.
- He had a police record dating back to the age of 12 and his criminal career - mainly shoplifting and burglary - continued unabated into adulthood.
- In 1981 he was jailed for two years at Middlesex Crown Court for robbery and grievous bodily harm after he attacked a homosexual man with a hammer.
- Two years later he was sentenced to four-and-a-half years for wounding, assault and dishonesty after he stabbed his sleeping victim in the chest with a kitchen knife.
- In 1987 he was jailed again, this time for an armed robbery on a building society in Brighton which netted him a measly £577.
- The trial was told that Stone supplemented his income by driving around Kent and stealing lawnmowers, mobile generators, hi-fi equipment and other easily disposable goods.
- Josie Russell, who was left for the dead in the attack, later told police a man had demanded money from them before tying them up and bludgeoning them with a hammer.

Antisocial Personality Disorder (Forensics)

- ‘With regard to formal assessments it seems that Mr Stone’s IQ falls in the low / average range. His profile from the Personality Disorder Questionnaire Revised shows that of a severely personality disordered personality. He also seems to have very low self esteem. This is not surprising in the context of his childhood’.
- Dr Q –Psych(F) reviewed elements of Stone’s personality and fantasies. He recorded that Mt Stone told him that he was prone to over-reacting to situations by bottling-up anger which he released later. He described having fantasies when not taking medication, of torture, dismembering people and killing them. There was no sexual fantasies associated with his aggression and no persecutory ideas or delusions present. Mr Stone described general fears and unease over his involvement in the criminal subculture and his childhood.
- Although Stone was free in the community and had seen to have ‘capacity’, he received regular supervision from psychiatry services and drug rehabilitation services and was subject to constant supervisory contact.
- Stone was regularly involved in violent incidents and had head-butted a shopkeeper during an argument.

Antisocial Personality Disorder (Forensics)

- His psychiatric review detailed:

- - *Early history of abusive upbringing involving abuse within the family and whilst in care;*
- - *An 'institutional upbringing';*
- - *Early delinquency;*
- - *Poor educational achievement;*
- - *Early drug abuse.*

- Further diagnostic formulation was:
- 'Dissocial Personality Disorder' and mental and behavioural disorder due to multiple drug and psychoactive substances, multi-substance abuse and drug-induced paranoia.'
- Stone was also described as a 'threatening patient'
- Stone abused Heroin 2-3 times a day and smoked Cannabis 2 to 3 times a day.
- Stone's psychiatrist assessed that 'he had no remorse for his past offences and that offending was likely to continue'.
- Stone had previously been detained under S2 and S3 of The Mental Health Act 1983 but was discharged on his appeal

Antisocial Personality Disorder (Forensics)

- Stone was diagnosed with Paranoid Personality Disorder.
- Stone reported to his psychiatrist that he had fantasies of torture, killing people and dismembering them. He considered the 'violence to be a means-to-an-end'. He expressed plans to kill prison officers if he should receive a future prison sentence.
- He described how he imagined strangling his girlfriend and cutting up her body in the bath, then disposing of it in bin liners.
- Stone needed large quantities of Benzodiazepines. These were provided by community mental health support. Stone obtained more benzodiazepines by creating false identities and threatening numerous doctors.
- Psychiatrist believed that Stone satisfied the criteria for Antisocial Personality Disorder with signs of Paranoid Illness.
- Further to this Stone was drinking a quarter bottle of Vodka every other day. His poly-substance abuse included daily abuse of Benzodiazepines, Heroin, Methadone and Cocaine. Ms ZP - CPN described his:
- • "Moderate to severe agitation; • Expression of paranoid ideation; • Aggressive thoughts/intent to harm others; • Verbally voluble behaviour accompanied by irritability and anger;
- • Excessive consumption of illicit drugs i.e. heroin; • Sudden heroin withdrawal; • Physically assaultive behaviour".

Antisocial Personality Disorder (Forensics)

- Mr Stone had told Dr T –CPsych(F) that he needed large quantities of benzodiazepines to sleep and that he obtained these by threatening local doctors. He admitted previously threatening to kill and decapitate people, but said these threats were not serious and that an overreaction to them had resulted in his detention.
- Dr T –CPsych(F) described Stone in his letter as:

- *'A tough-minded man …(who).. at no point displayed any features of a psychotic illness. He had credible explanations for apparently psychotic episodes …(and)… denied ever hearing voices. The most striking abnormality was his extreme callous attitudes towards victims and anger and contempt towards several professionals involved with him'*

Antisocial Personality Disorder (Forensics)

- Ms ZP- CPN's Notes – 4th-5th July 1996

- 'Michael became agitated when recalling his present circumstances and vented anger at being forced to live in his mother's flat, finding his own uninhabitable'.

Michael focused on a previous probation officer, Mr HH - PO, whom he blames for all of his ills. In discussion, the intensity of Michael's anger increased accompanied by a series of threats, both physical and psychological, towards Mr HH - PO and his family. These consisted of threats to kill Mr HH - PO and also a campaign of intimidation accompanied by a further series of threats toward Mr HH - PO and his family, the nature of which compromised threats of retributory violence and threats to rape Mr HH - PO's wife. Michael was unaware of Mr HH - PO's address but he asserted he will soon discover this and planned to buy the house next door as a base to undertake his vendetta'

- She detected no psychotic phenomena nor any self harm or suicidal intent. Her risk assessment concluded:
- *'Due to his history of assaultative behaviour and substance abuse Michael has the potential to pose a risk to others and self. However, in the last two years his life has been relatively stable and he has cooperated fully with agencies involved in his care'*

Antisocial Personality Disorder (Forensics)

- Ms ZP- CPN's Notes – 4th-5th July 1996

- *'At 1400 hrs, I rang Rochester probation and spoke to the Senior Probation Officer to ensure they are aware of Michael's threats towards Mr HH – PO. At the same time I advised that Michael had booby trapped his house with a 10,000 volt circuit, armed himself with swords and an electric plane and also possessed two vicious dogs for his own protection. Although Michael's story is factual there are certain embellishments which would appear to give him more credibility'.*

- Joint Press Statement 23.10.98
- *'Michael Stone is a violent man. He has served many years in prison for a variety of offences including violent offences but he is not mentally ill. He has an antisocial personality disorder. He has also abused drugs over a very long period of time including cannabis, amphetamines, cocaine, benzodiazepines, methadone, heroin and alcohol. He abused different drugs in different combinations at different times. But Michael Stone is responsible for his own actions'. Personality Disorder is a deeply ingrained behaviour pattern that represents a significant departure from the way the average individual would behave. People with these personality disorders will often show a callous lack of concern for others. Some will have a tendency to resort to violence and an incapacity to experience guilt. Michael Stone's personality disorder is resistant to treatment and his abuse of illicit drugs makes his behaviour even more unpredictable.*