

Anxiety: A clinical psychologist's very short introduction

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Charles Darwin and Panic Disorder

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Charles Darwin (1809-1882) suffered from a chronic illness that, throughout much of his adult life, impaired his functioning and severely limited his activities. The writings of this famous scientist as well as biographical materials indicate that he probably suffered from an anxiety disorder. His symptoms, when considered individually, suggest a variety of conditions, but taken together they point toward panic disorder with agoraphobia. This diagnosis brings coherence to Darwin's activities and explains his secluded lifestyle, including difficulty in speaking before groups and meeting with colleagues.

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CHARLES DARWIN (1809-1882) suffered from a chronic illness that impaired his functioning and altered the course of his life. His symptoms involved many organ systems, but anxiety was especially prominent.¹ As a young man he had episodes of abdominal distress, especially in stressful situations.^{2,3} Later, he experienced cardiac palpitations and chest pain in anticipation of his voyage on the *Beagle*.^{4,5,6,7} During his travels, Darwin remained well, although seasickness was a recurrent problem. Even after his return to England, he led a vigorous life, presenting papers at various societies, attending meetings, and writing a travel narrative.⁸ However, at the age of 28 years he began to experience attacks of fear. Describing them, he said, "I have awakened in the night being slightly unwell and felt so much afraid though my reason was laughing and told me there was nothing and tried to seize hold of objects to be frightened of."⁹ Throughout the remainder of his life, he experienced recurrent attacks accompanied by a variety of physical and emotional symptoms including pal-

pitations, shortness of breath, lightheadedness, trembling, crying, and abdominal distress. This illness was present during the 22-year period when Darwin was writing *On the Origin of Species* (published in 1859).

Darwin was attended by physicians who considered "dyspepsia with an aggravated character," "costal dyspepsia," and "suppressed gout."¹⁰ Based on available information, historians suggested a variety of diagnoses from arsenic poisoning to neurasthenia. From the writings of Darwin himself, as well as biographical materials, we conclude that he may have suffered from panic disorder with agoraphobia. Panic disorder is a chronic illness characterized by sudden attacks of fear accompanied by somatic symptoms such as palpitations, dizziness, and shortness of breath.¹¹ Agoraphobia, a variant or complication of this disorder, is an unreasonable fear of situations from which escape might be difficult or help unavailable in case of incapacitation (ie, a panic attack). This fear leads to avoidance of situations such as crowds, travel, and being alone. Panic disorder can impose severe restrictions and have a devastating impact on a person's life. To our knowledge, this diagnosis has not been previously suggested as the explanation for Darwin's symptoms.

A great deal has been written about

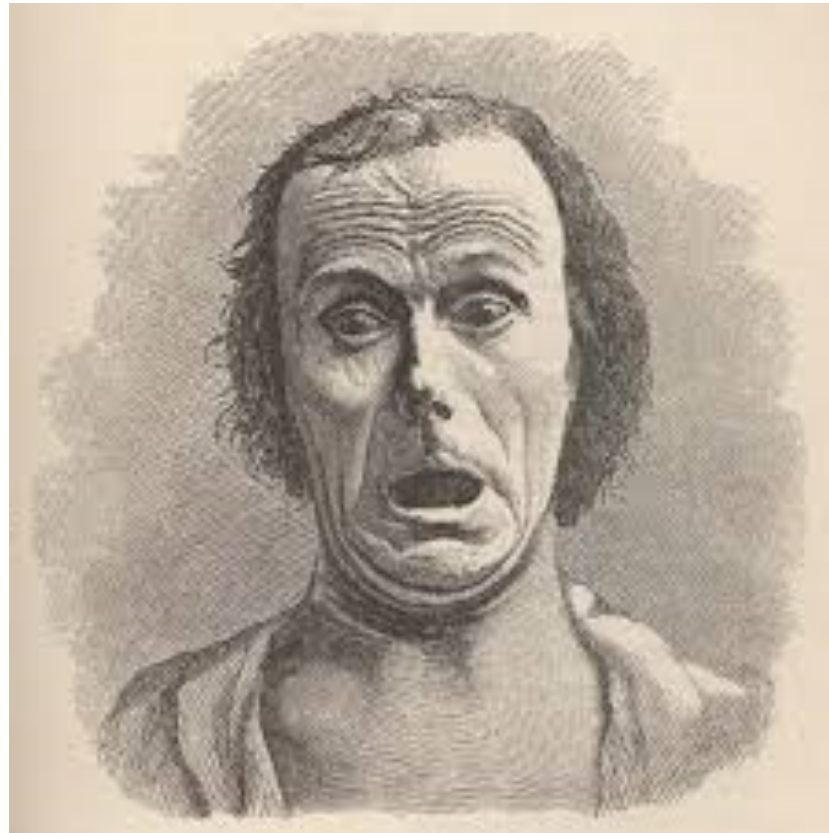
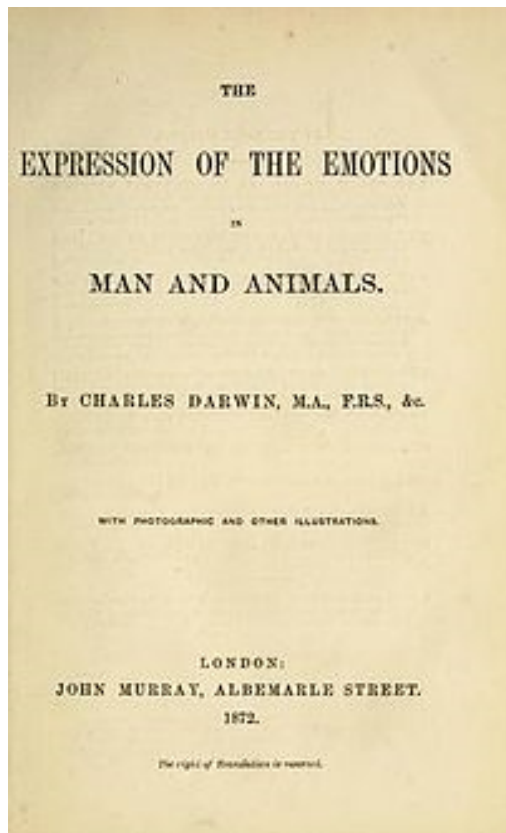
Darwin's illness, much of it by the great man himself, and from many sources a rather complete description of his condition may be pieced together. To obtain a full picture, we abstracted Darwin's personal reflections from notebooks, letters, and diaries. We also consulted Darwin's autobiography,⁴ his published correspondence, several recent biographies, and 2 volumes of his letters, published posthumously by his son, Francis Darwin.¹¹⁻¹³ These materials show that Darwin began mentioning health problems as early as 1825 and continued to write about them until late in life.

DARWIN'S ILLNESS

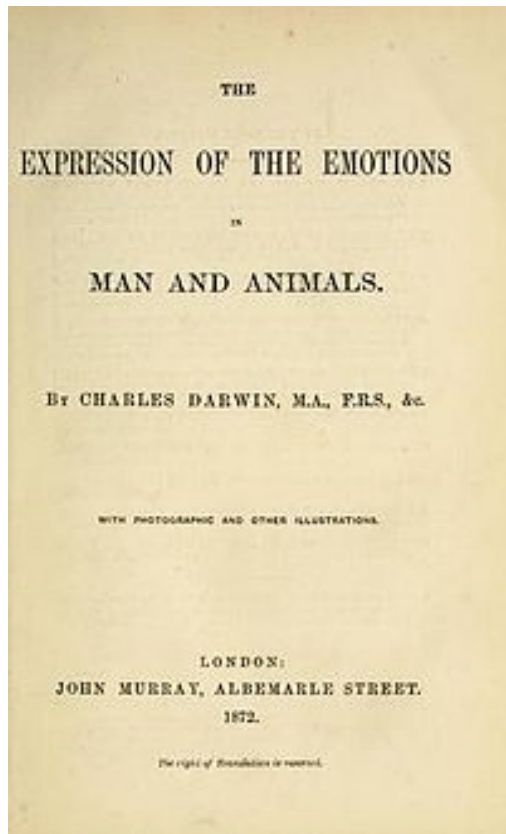
In descriptions of his illness, Darwin frequently referred to discrete attacks that began suddenly and left him drained. For example, he referred to "many bad attacks of sickness," and Dr Edward Lane, a personal physician, twice used "attacks" when writing about Darwin's illness.¹⁴ These attacks consisted of palpitations, shortness of breath ("air fatigues"), lightheadedness ("head swimming"), trembling, crying, dying sensations, abdominal distress, and depersonalization ("treading on air and vision"). Such symptomatic surges were very disruptive, as Darwin said, "[C]onstant attacks... make life an intolerable bother and stop all work."¹⁵ Darwin's accounts contain numerous references to typical panic symptoms during attacks. For example, writing in his journal he described himself as, "[u]usually unwell, with swimming of the head, depression, trembling—and many bad attacks of sickness."¹⁶ In a letter to his friend and confidant Joseph Hooker, he added, "My nervous system began to be affected so that my hands trembled and my head was often swimming."¹⁷ and in another letter, he noted,

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Charles Darwin



Charles Darwin



“The eyes and mouth are widely opened, and the eyebrows raised. The frightened man at first stands like a statue motionless and breathless, or crouches down as if instinctively to escape observation. The heart beats quickly and violently . . . The skin instantly becomes pale . . . [and cold] perspiration exudes from it . . . The hairs on the skin stand erect . . . the mouth becomes dry . . .”

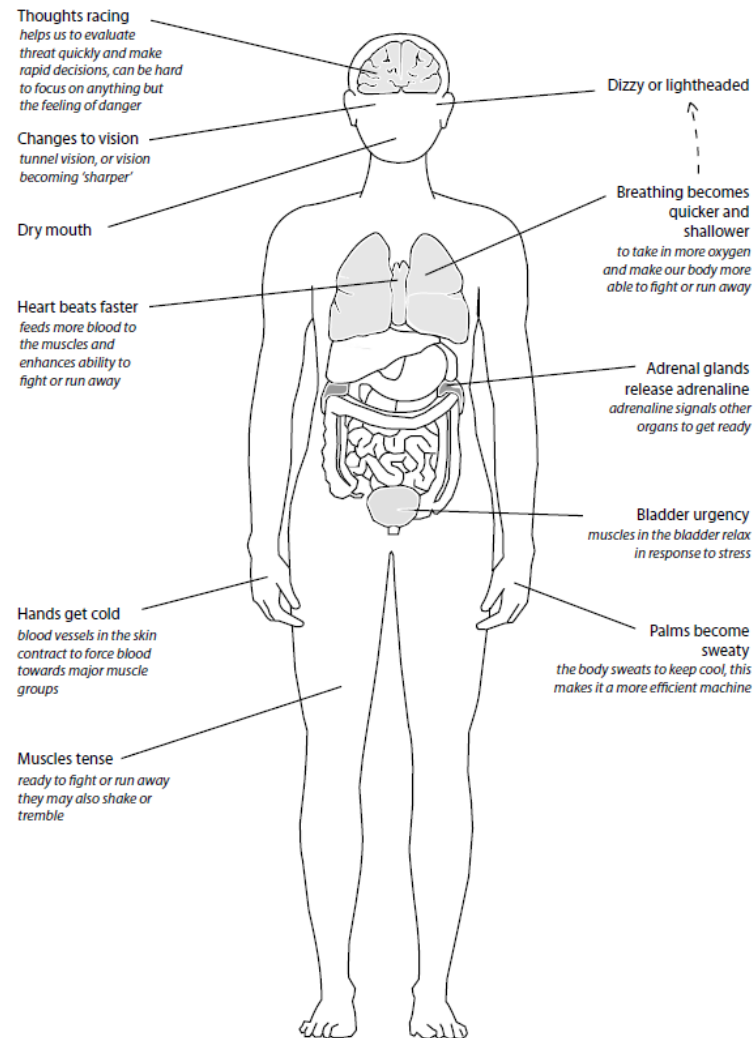
Michael Palin



“Anxiety doesn’t ever go away. There’s not suddenly a sun-lit plateau where you’re never anxious about anything – it just takes different shapes and forms.”

“My anxiety levels seem to go up the more I’m obviously scrutinized. When we’re doing the travelling for the documentaries and I’m meeting people as we go along – people think that’s incredibly difficult. I don’t mind that: that’s fine. It’s when you suddenly have: ‘right, you’ve got to do a piece to camera’. If you get something wrong, they say ‘try it again, I think you slightly hurried that bit’. And then the anxiety begins to build up...”

The signs of anxiety



Exams

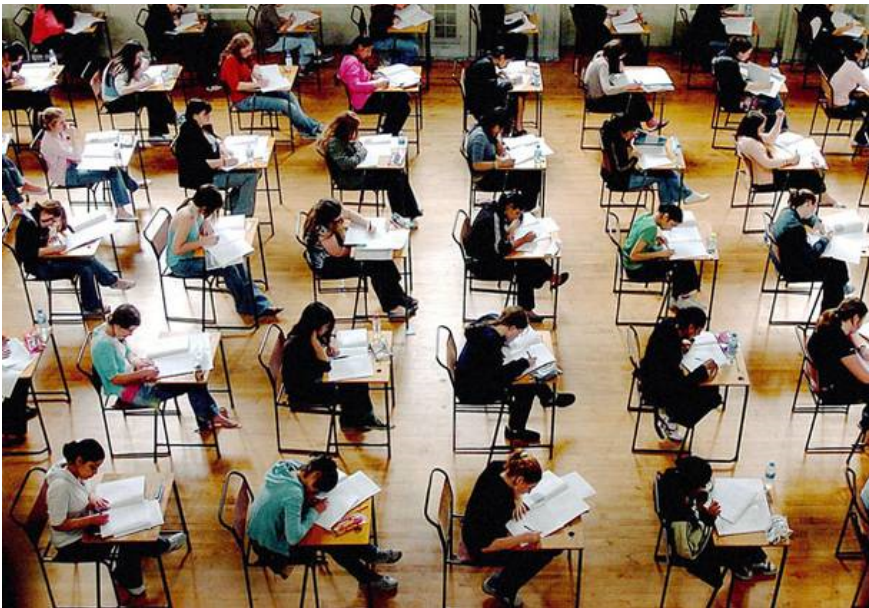


Table 1 – Key Stress Issues for Students

Issues	% who believe this to be 'reasonably' or 'very' stressful
Exams and assessments	90.5%
Considering career prospects	75.2%
Managing time and deadlines	83.3%
Self image	54.6%
Paying rent and bills	48.7%
Having enough money to get by	68.2%
Dealing with student loans	38%
Dealing with commercial debt	35.2%
Working a paid job	50%

Silently Stressed

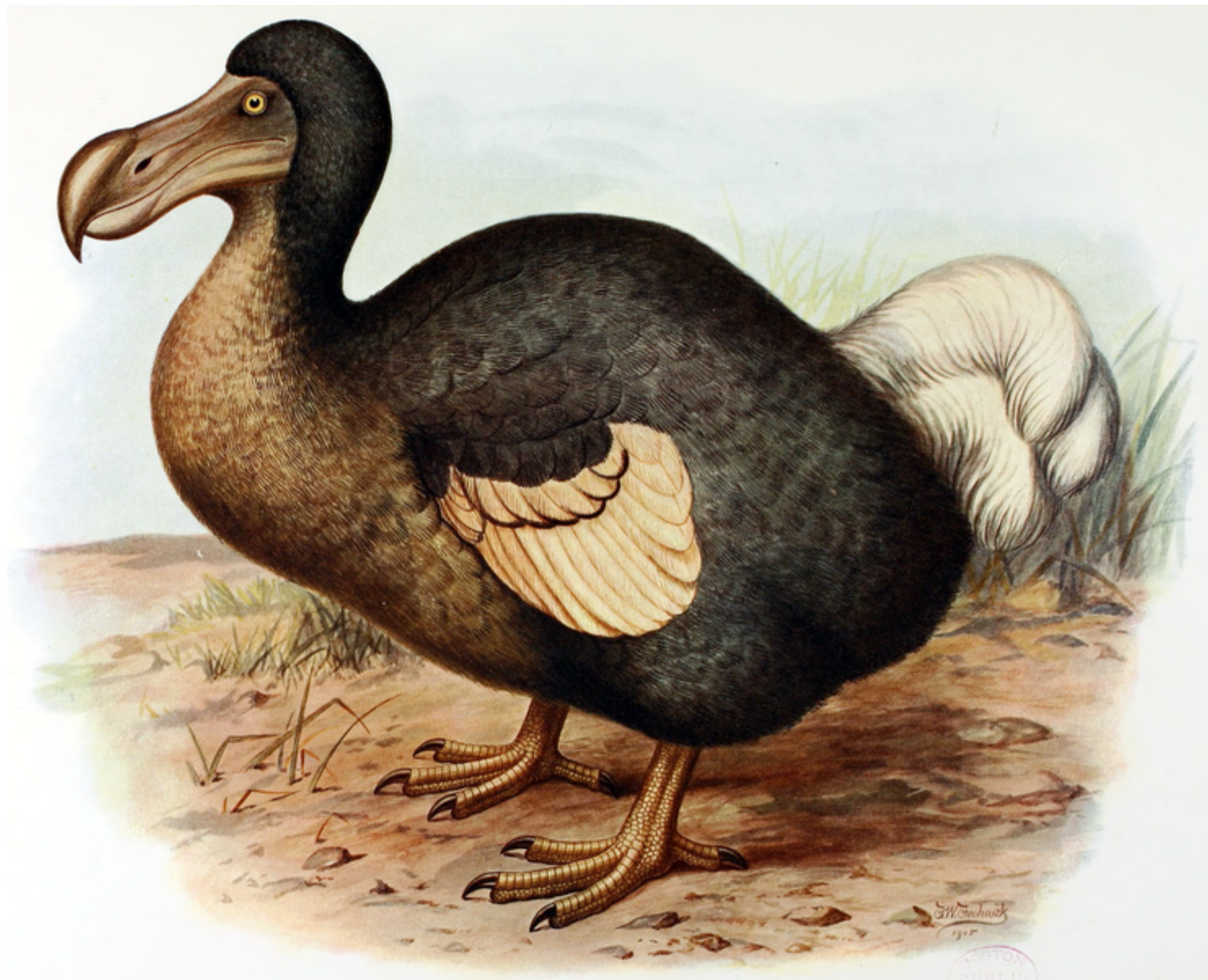
A survey into student mental wellbeing



Anxiety and exam performance

Level of general anxiety assessed before admission to Oxford ($n = 635$) (Mellanby & Zimdars, 2011):

- More generally anxious, then greater exam stress.
- But anxiety didn't predict men's exam performance
- While higher trait anxiety predicted better performance in women.





What are the origins of anxiety?

1. Genes
30-40% heritability

What are the
origins of anxiety?

2. Bad experiences
(conditioned learning)





What are the
origins of anxiety?

3. Vicarious learning

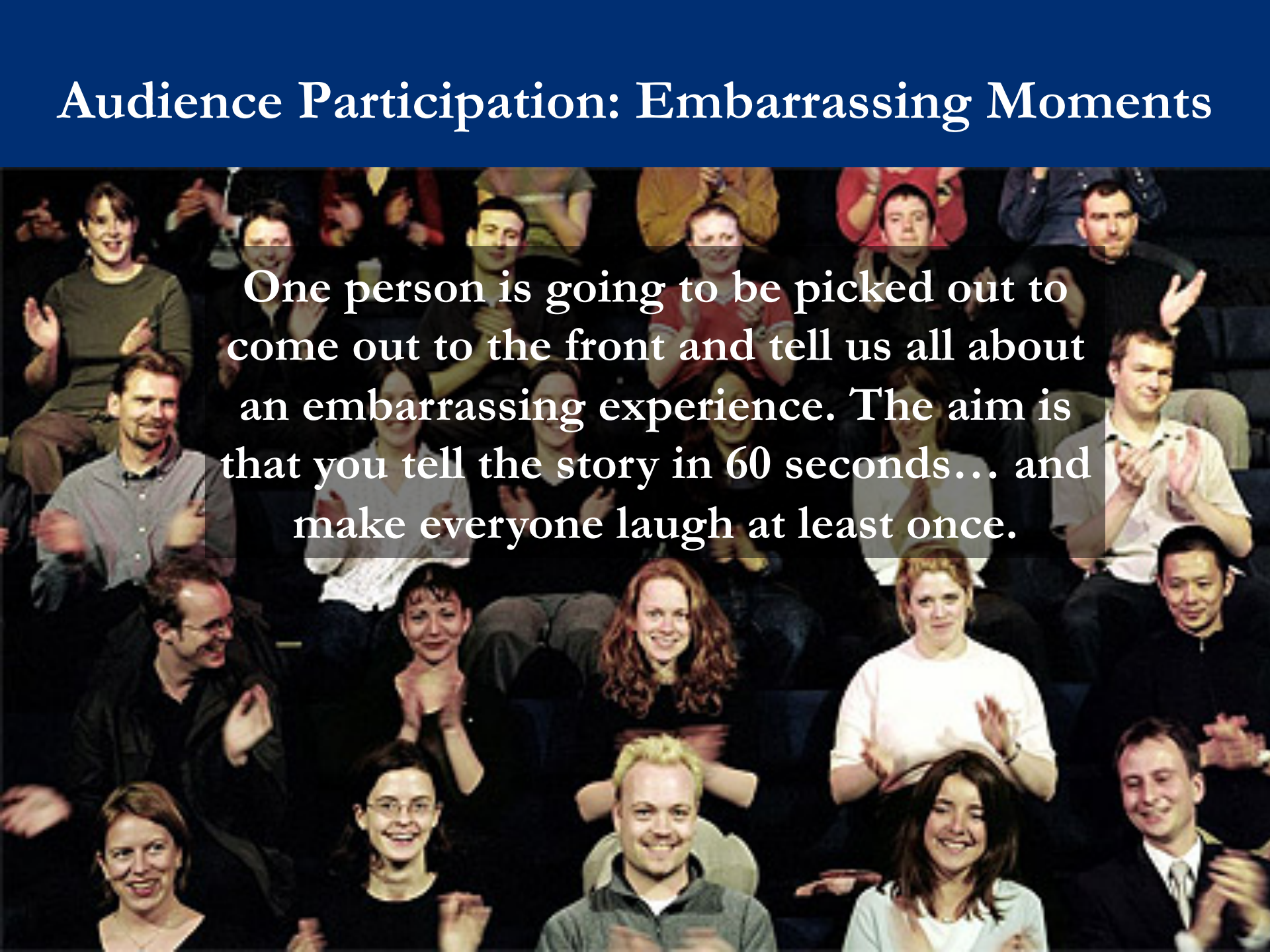


Vicarious learning



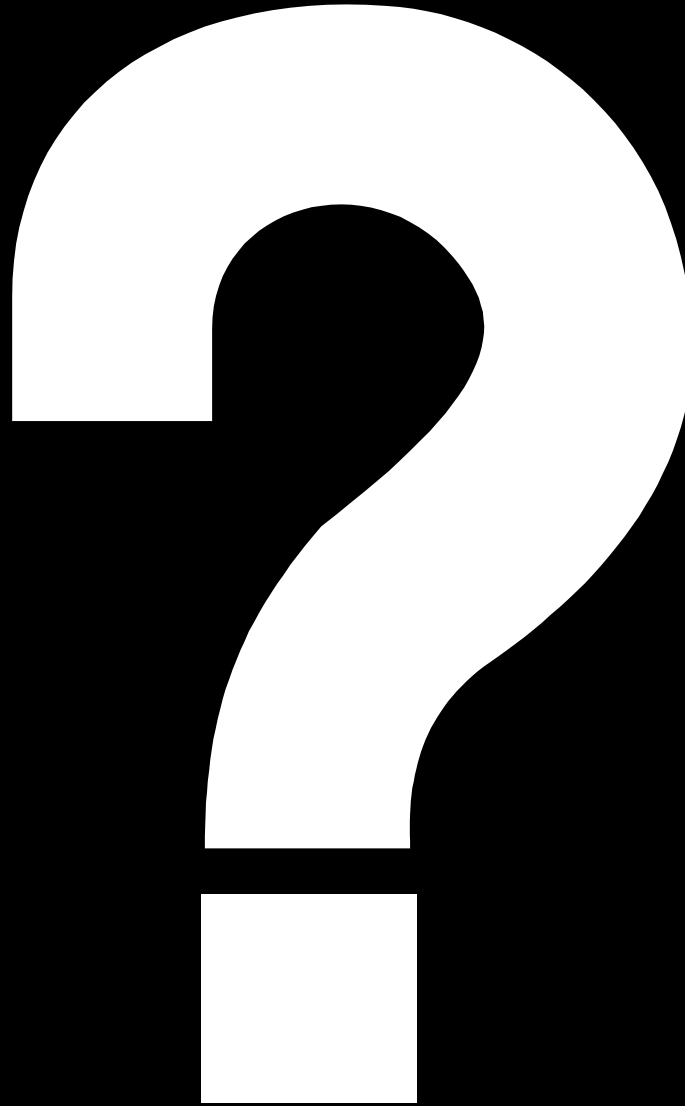
The clinical psychology perspective: 6 key processes

Audience Participation: Embarrassing Moments

A large, diverse group of people is seated in a theater or lecture hall. Many of the audience members are clapping and smiling, suggesting a positive and engaged atmosphere. The text is overlaid on a semi-transparent white box in the center of the image.

One person is going to be picked out to come out to the front and tell us all about an embarrassing experience. The aim is that you tell the story in 60 seconds... and make everyone laugh at least once.

Three typical psychologist questions



Process 1: Thoughts anticipating threat



Unhelpful anxiety is when we make threatening *misinterpretations* of what is going to happen.

A noise in the night



Process 2: Safety behaviours maintain fears



Process 3: Negative Images



“I have an image of me looking guilty, nervous, anxious, embarrassed. It’s my face – the features are distorted, intensified, big nose, weak chin, big ears, red face. Slightly awkward body posture, introverted body posture, turning in on myself. I look stupid.”

Process 4...

CAR RADIATOR APPLE PEN
ELEPHANT DOOR TEA FLOOR

BLACK GREEN YELLOW PINK
ORANGE RED WHITE BLACK

SCARED THREAT HARM FOOLISH
ISOLATED MOCKED BLAMED
DESPISED

Process 4: Attention to threat

“Love looks forward, hate looks back, anxiety has eyes all over its head.”

... and actually the attention is inwards

Focus of attention



Process 5: Catastrophising

What bad thing is
going to happen?



Process 6: Thought Suppression



For 60 seconds, don't think about white bears...

The clinical psychology perspective: 6 key processes



SCARED THREAT HARM FOOLISH
ISOLATED MOCKED BLAMED
DESPISED



The six main anxiety disorders

1. Phobias



2. Social anxiety



3. Panic disorder



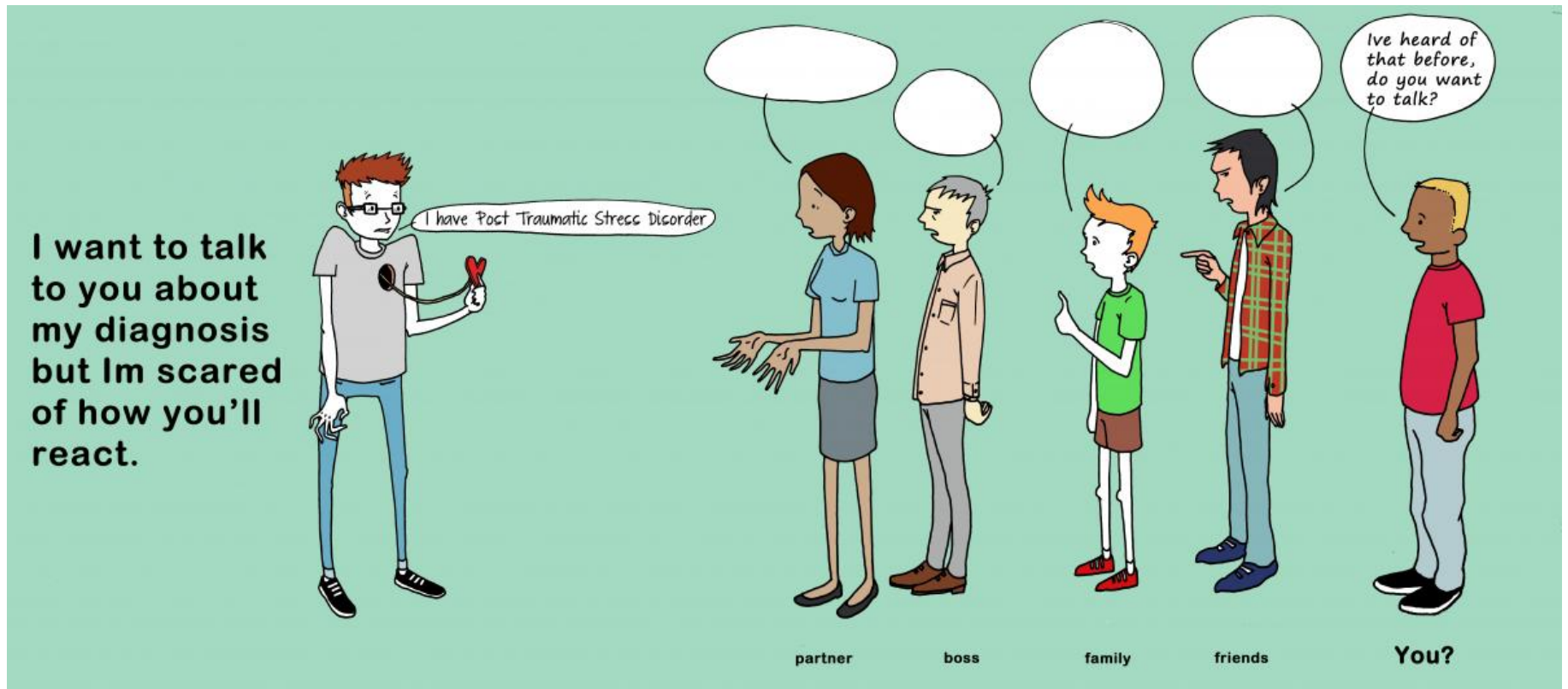
4. Obsessive-compulsive disorder



5. Generalised anxiety disorder



6. Post-traumatic stress disorder

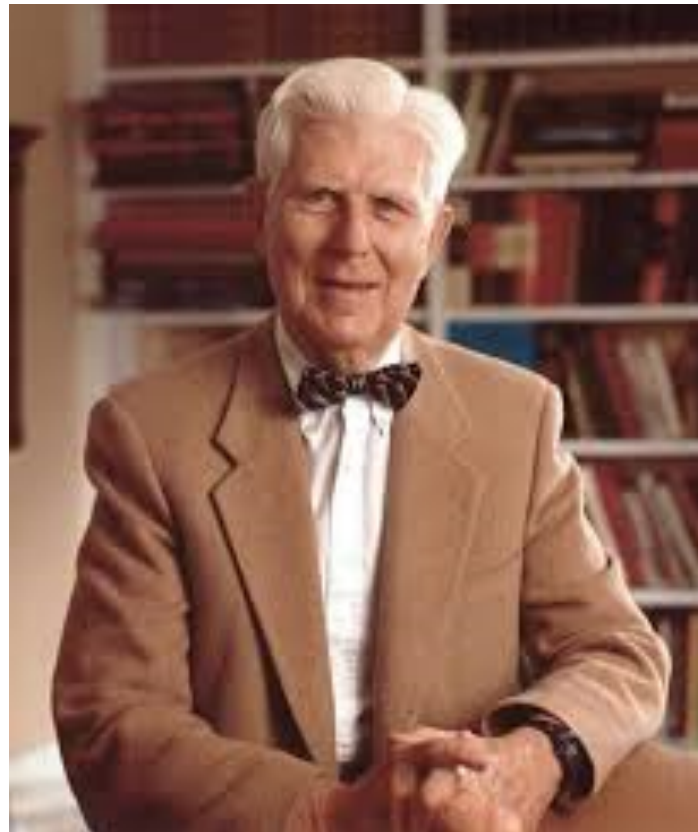


12 month prevalence

1. Phobias. *9.1%*
2. Social Anxiety. *7.1%*
3. Panic disorder. *2.7%*
4. Obsessive-compulsive disorder (OCD). *1.2%*
5. Generalised anxiety disorder (GAD). *2.7%*
6. Post Traumatic Stress Disorder (PTSD). *3.6%*

Treatment

Cognitive-behavioural therapy (CBT)



Test out fears (dropping safety behaviours)



Reducing worry



Reducing worry



Switching attention

1. 'What's going right for me right now?'
2. At end of day, list three positive events.
3. Keep data log of positive events.

Switching attention: Savouring

JOY, GRATITUDE, SERENITY,
INTEREST, HOPE, HAPPINESS,
AMUSEMENT, INSPIRATION, AWE,
LOVE

Imagery



5-a-day



5-a-day for well-being



1. Connect
2. Be active
3. Take notice
4. Keep Learning
5. Give

Good mental health tips

1. Activities crucial (with attention on the activity rather than self).
2. Basics: good sleep, regular and healthy meals, physical activity.
3. Thoughts are not facts. Test them out. Then let them go.
4. Avoid avoidance of other people. Use social support. Share fears.
5. Limit worry and rumination.
6. Switch focus to the positive rather than threat.

Michael Palin



“People see people like myself and they say ‘you have the best job in the world, you’re free of cares and gosh we’d all like to be like you and to be able to stand up and make a speech and all that’. I don’t do any of those things without at some point feeling anxious.”

“One has to confront these situations. If you avoid them it’s not great because there will always be that little bit in your memory, which says ‘I cant do that; I was never able to do that’. So even if you’ve tried and failed, at least you did it and it wasn’t so bad.”