

NeuroImaging Techniques

Discovering Anxiety Disorder.

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Introduction

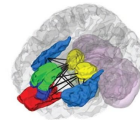
- What do you know about anxiety disorder?
Anxiety disorder are a set of pathological fears and anxieties like:
 - posttraumatic stress disorder (PTSD)
 - social anxiety disorder
 - specific phobia
 - normal fears
 - [...]

Introduction

- What happens inside our brains?
Various studies show that there is a link between anxiety disorders and specific areas of the brain. Different areas are activated during anxiety's process.

Introduction

- How do we know it?
The study of human anxiety disorders has benefited greatly from functional neuroimaging approaches.



Objective

- The focus of this study is show that:
 - There is a link between anxiety disorders and specific areas of the brain.

Hypothesis

- My hypothesis is that there is a link between anxiety disorders and specific areas of the brain like the amygdalae and insular cortices.

Material and Methods

- Subjects:
Patients with some kind of anxiety disorder and healthy patients.
Also we take patients with different age and gender.

Material and Methods

- Experimental paradigm:
Searched for common and disorder-specific functional neurobiological deficits in several anxiety disorders.

Material and Methods

How do it?

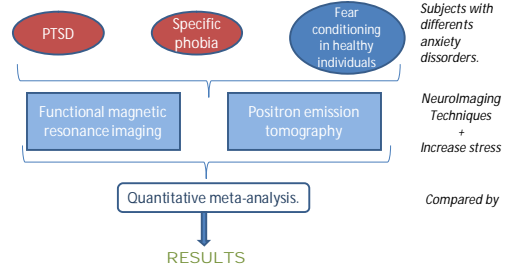
During the test, patients will be subjected to such a state of stress by increasing their anxiety. It will be through image and sounds.

Example:

To brain activation of fear in healthy patients we use phobia-related (ex.: spider) and neutral pictures.

Material and Methods

- Design:



Material and Methods

- Neuroimaging techniques.

Why two Neuroimaging techniques?

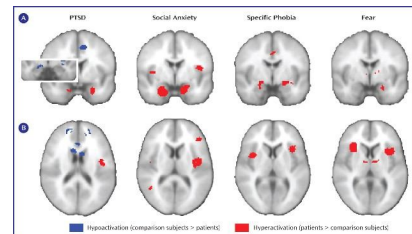
We also use PET techniques to save the results.

So, maybe in some patients will find out a lower activation and throw PET we'll be able know if the reason is that they've few neurotransmitters.

Material and Methods

- Results:

The forebrain is the area most affected in people with anxiety disorders.



Results are shown for the amygdalae (A) and insular cortices (B).

Problems

- The study need a large number of subjects. Actually it represent a relatively limited population size.
- Noted age and gender ratio differences between subjects.
- The PET techniques require a meticulous process.