

UbiCAT: Ubiquitous Cognitive Assessment Tool

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Background

- Cognitive Functions are mental processes that allow us to carry out a task
 - For example **working memory** and **executive function**
- Cognitive impairment is **prevalent** in **bipolar and depressed patients**
- However**, patients don't know when to visit their clinician

What happens if...

Patient notice based on their objective features?



Few **sleep hours** collected by patient's **smartwatch**
indicated **onset of manic phase**



Objective Data → **Cognitive fluctuation (e.g. in memory)**

Why Smartwatch?

-people carry it everywhere



Outlook

Current wearables:

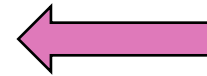
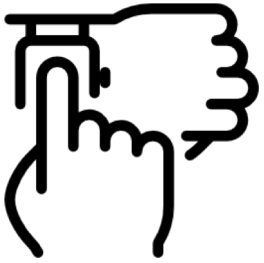
- Step count
- Heart Rate
- Sleep



- Working memory
- Attention
- Psychomotor speed
- Executive Function

UbiCAT

Cognitive tests



Objective data



Thanks for Your Attention!