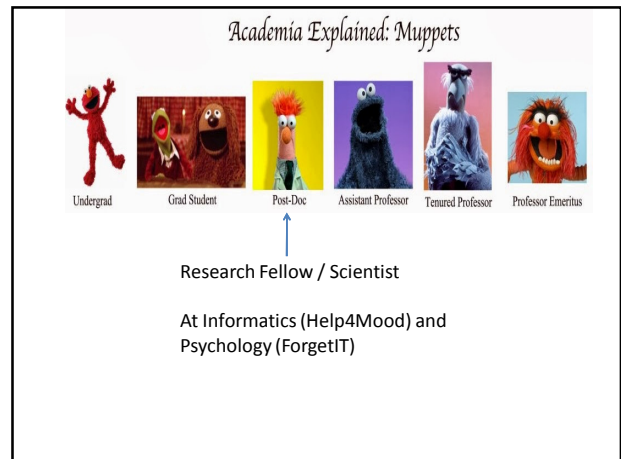


The Challenge of Collecting Meaningful Data

CCACE/Informatics Day
 Maria Wolters
 Informatics & Psychology
 (CSTR & HCN)



Goal:

Design technology that helps people with chronic conditions that affect mental or cognitive function live their lives to the full

CADENCE – Intelligent Calendar Assistant

TeleSynth – spoken medication reminders

MultiMemoHome – home care reminders

Help4Mood – supporting the treatment of people with depression in the community

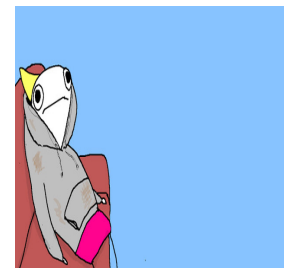
MATCH – telecare in Scotland

Help4Mood

Look at person from different angles to see what is going on:

- Activity
- Speech
- Sleep
- Thoughts
- Mood

Make sense of it together



Brosh 2013, Hyperbole and a Half

Report:

activity lower than normal,
 speech slower than normal,
 sleep more restless than normal,
 negative thoughts about family,
 mood down

Report:

activity lower than normal,
 speech slower than normal,
 sleep more restless than normal,
 negative thoughts about family,
 mood down

But what do we measure?

Activity in the Wild

- If you want to track activity, you need to give people a choice
- But depending where accelerometer sits, measurements & sensitivity to activities differs



Speech

- Counting backwards and forwards ✓
- Name as many animals as you can in 60 seconds ✓
- Tell me about your day ✗

Often, there are no thresholds.
There is just what is normal for the person when healthy.
But what is normal?
What is healthy?
(systematic review for depression: Burton et al, 2013)

Report:

activity lower than normal,
speech slower than normal,
sleep more restless than normal,
negative thoughts about family,
mood down



I woke up
this morning
and my woman,
she had done
left me.

Report:

activity lower than normal,
speech slower than normal,
sleep more restless than normal,
negative thoughts about family,
mood down

Thank You!

- [F13 Psychology / 3.46 IF](#)
- Maria.wolters@ed.ac.uk
- @mariawolters
- Mariawolters.net / mariawolters.wordpress.com
- Design User Interfaces for Data Collection from and Support of People with Chronic Mental / Cognitive Conditions