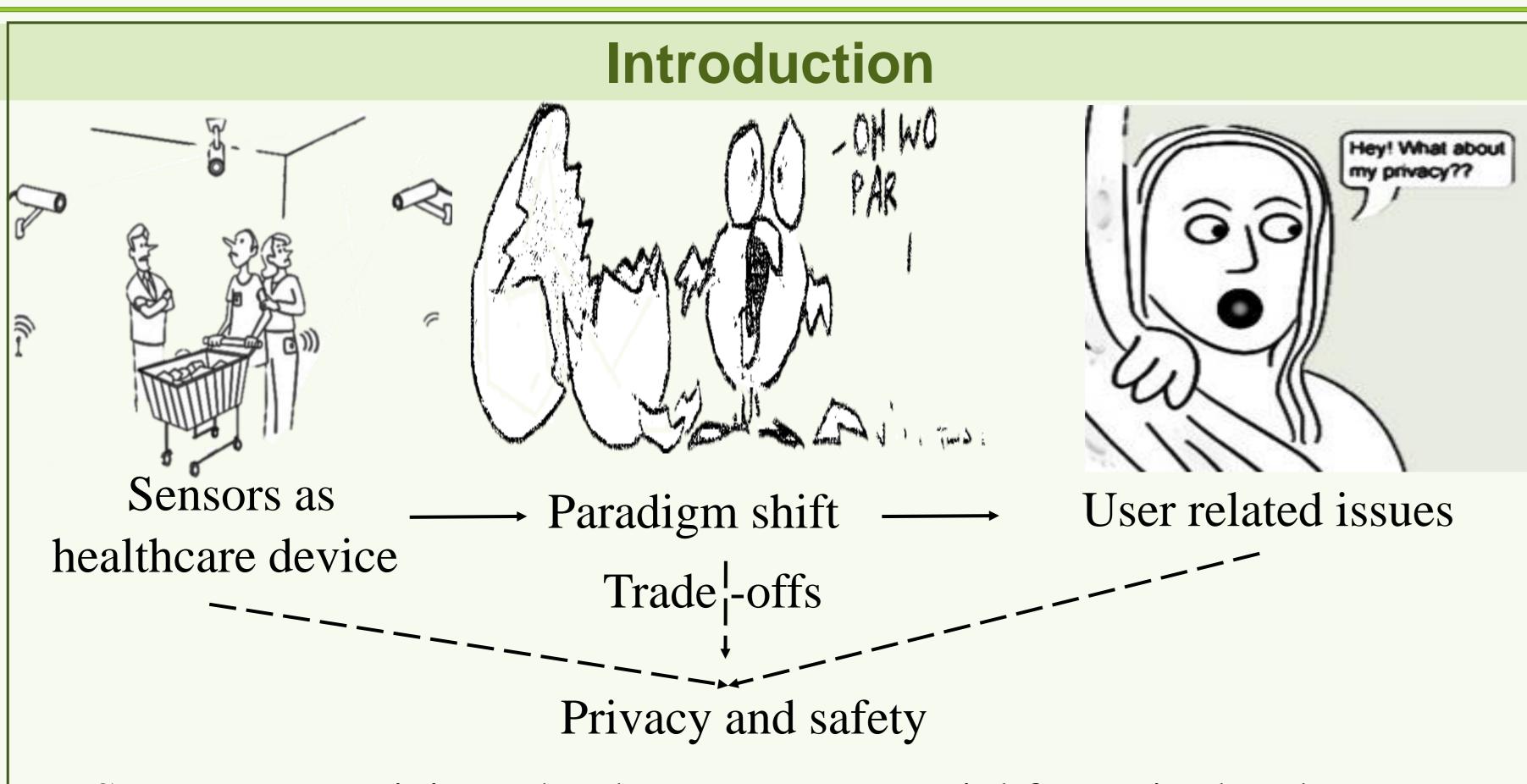
## Concerns and Tradeoffs Balancing Privacy and Safety in Sensorbased Monitoring of Older People Living at Home

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- Sensors are anticipated to become an essential factor in development of healthcare technologies
- This development is causing a major shift in society that, in turn, presents people with new challenges and possibilities
- By bringing this technology into our homes there are tradeoffs between convince, control, security and privacy, as these applications deals with personal information, which can easily document and quantify habits, routines, and personal associations.

### Objectives

The focus of this study is on the balance between opportunities and challenges within monitoring technology and information privacy, with more weight given to concerns and the trade-off between privacy and safety

- Explore the nature of users' concerns about privacy when being monitored
- Investigate relationships between participants' perceived benefit & and their trust/mistrust in privacy being under their control

## Research methodology and technicalities

Recruitment (Total n≈26)

Screened 4-5 days N=26

Balanced randomization (N=26/22)

4 opted out

N= 22 monitored 9 week (0ct-dec 2016) using Fitbit Charge HR

4 weeks steps feedback	4 weeks sleep feedback
4 weeks sleep feedback	4 weeks steps feedback

1 passed away after 9 week session

Post-trial semi-structured interview January 2017

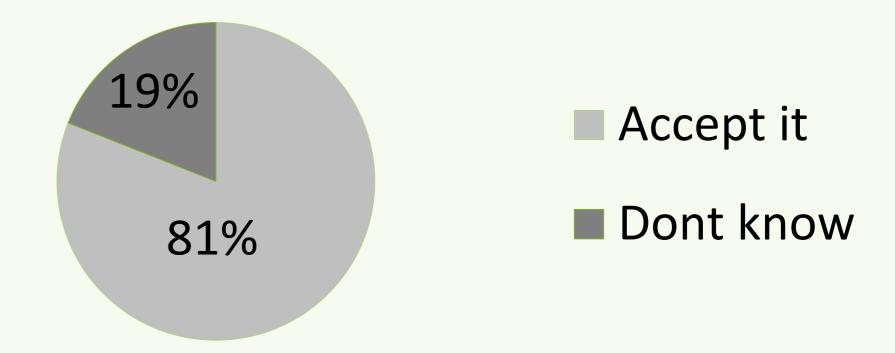
#### The characteristics of the remaining 21 participants

Sample size:	n=21
Age range:	71-94
Mean age	85 yrs
Gender	18 females, 3 males

#### Older Adult responses

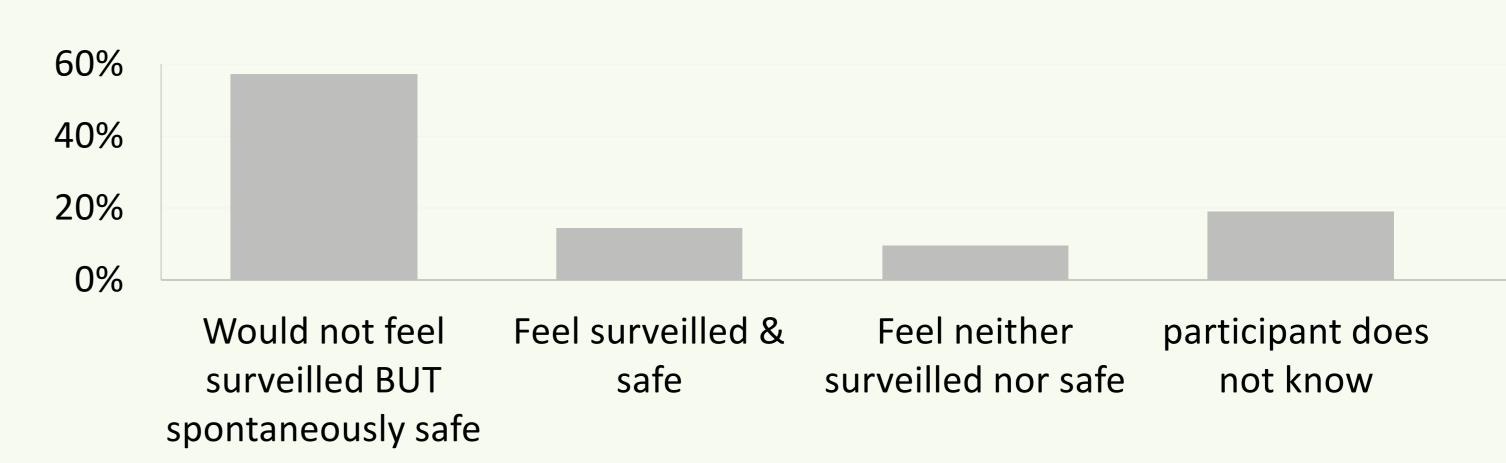
- Most participants did not have concerns about their privacy "someone is looking after me, someone cares about me"
- Mixed reactions about the device
  - Some like the functionality of the device & others didn't care about it
- Importance of privacy and protecting depends on individual's health condition and current needs.
- Being monitored, could impact their comfort, but also makes them feel safe. The fear of injury (in case of fall) seems to be greater than the discomfort of feeling watched.

What would you say if your municipal nurse offers to monitor your daily activity?



Participant indicated, they are unconcerned about being monitored by technologies managed as health care device, but they need to be convinced that the technology brings advantages for them and their health.

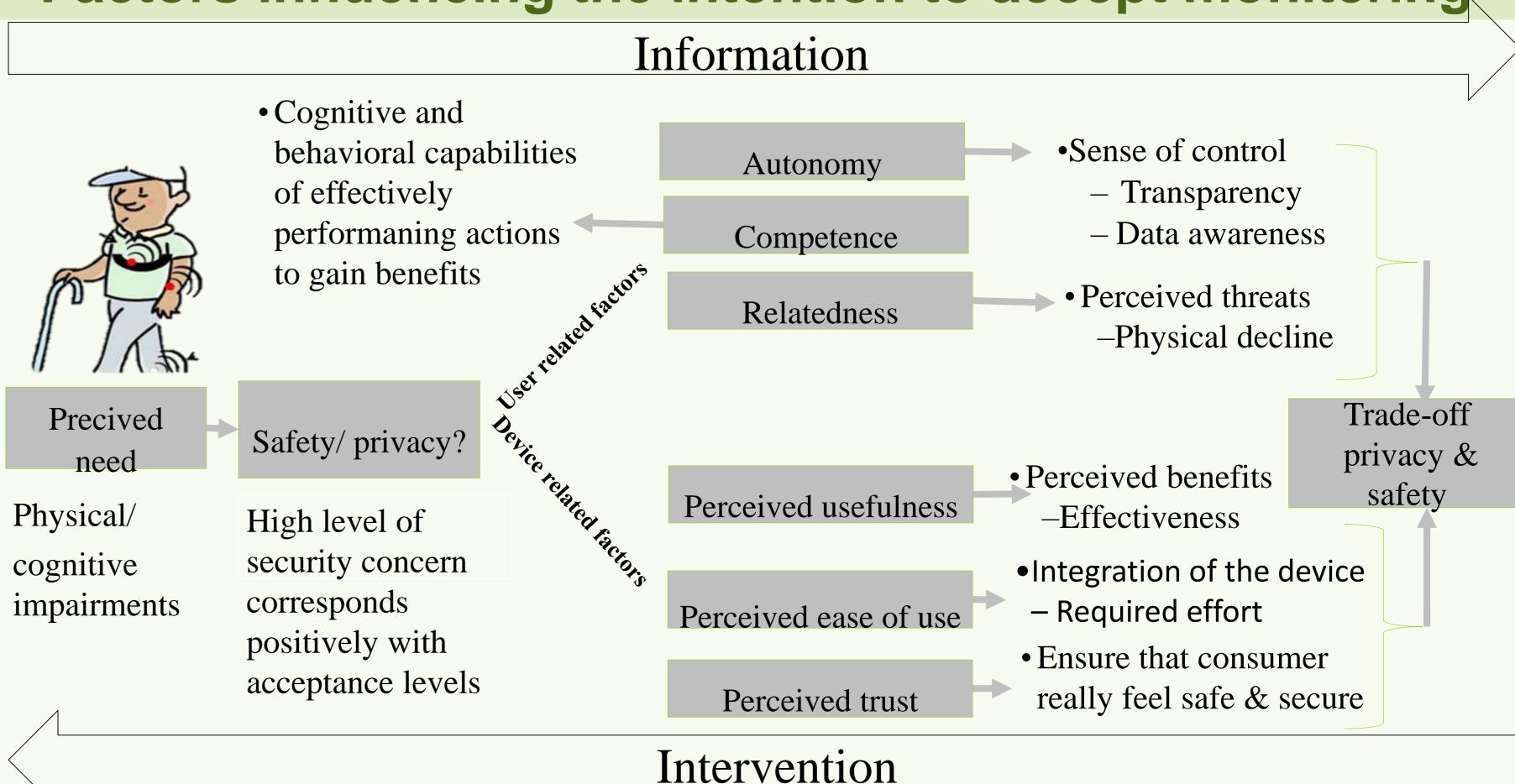
# Would you feel surveilled if the data were shared with your care giver / nurse or doctor?



#### Is there a limit on what type of data can be obtained?

Interview data n=21	Percent %	Count
No limit	71%	15
Yes, there is a limit	29%	6
Total	100%	21

### Factors influencing the intention to accept monitering



Results indicate participants are willing to provide personal information, but only under certain conditions. They will disclose their personal information if the benefits outweigh the risks that threats their health & independent. Concerns caused by monitoring, such as a loss of privacy, can be justified by a 'need' for the technology derived from safety concerns related to health. The benefit of safety is worth the cost of privacy