



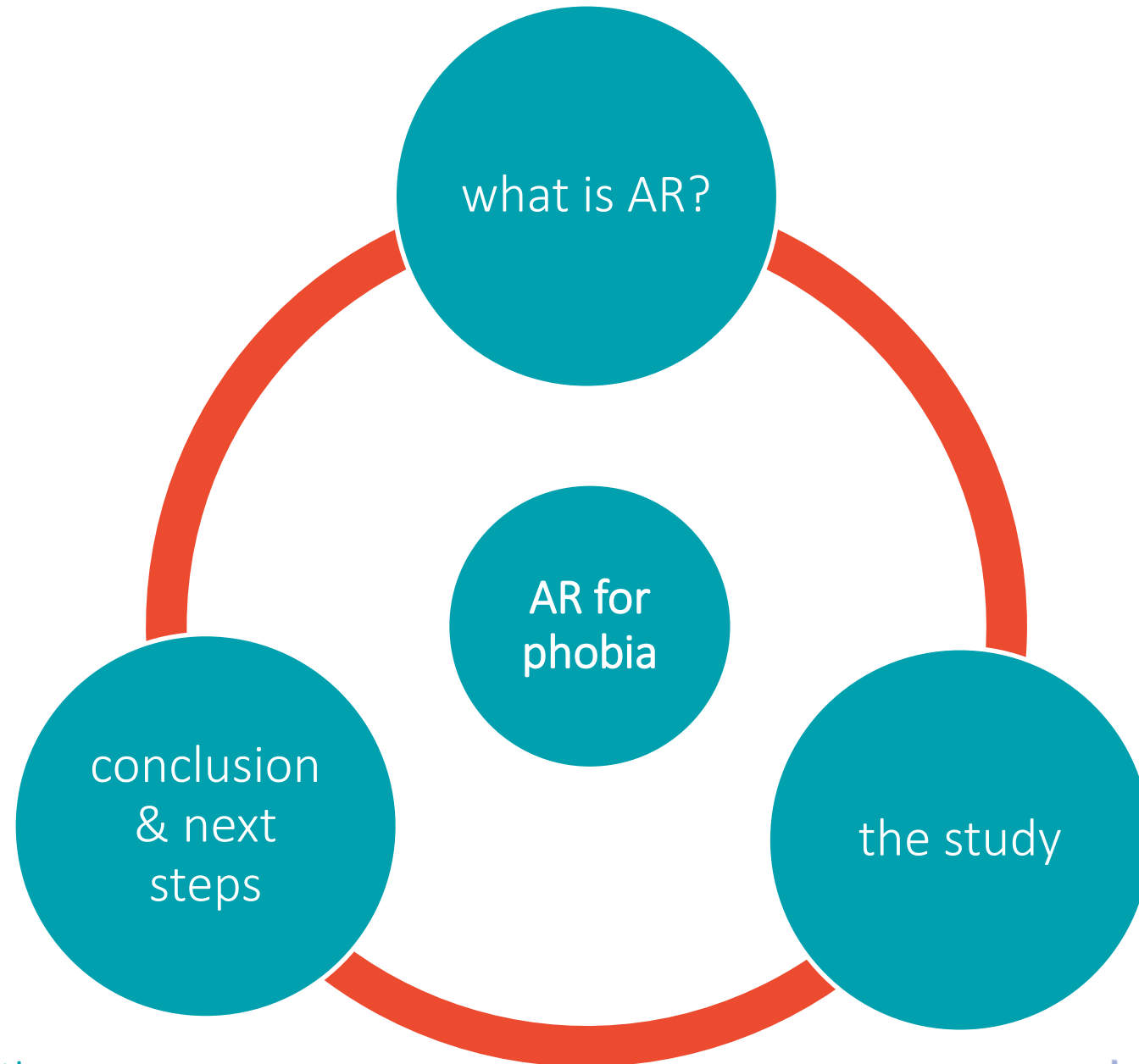
AUGMENTED REALITY AND ANIMAL PHOBIA

THE POTENTIAL OF THE PHOBOS AR SMARTPHONE APP
TO ELICIT FEELINGS OF ANXIETY

Tom Van Daele & Fernando Tarnogol
14 May 2019, BAPS meeting, Liège



FOCUS



WHAT IS AR?

Augmented reality is a form of extended reality (XR)
& aims to merge virtual elements into the view of the physical world

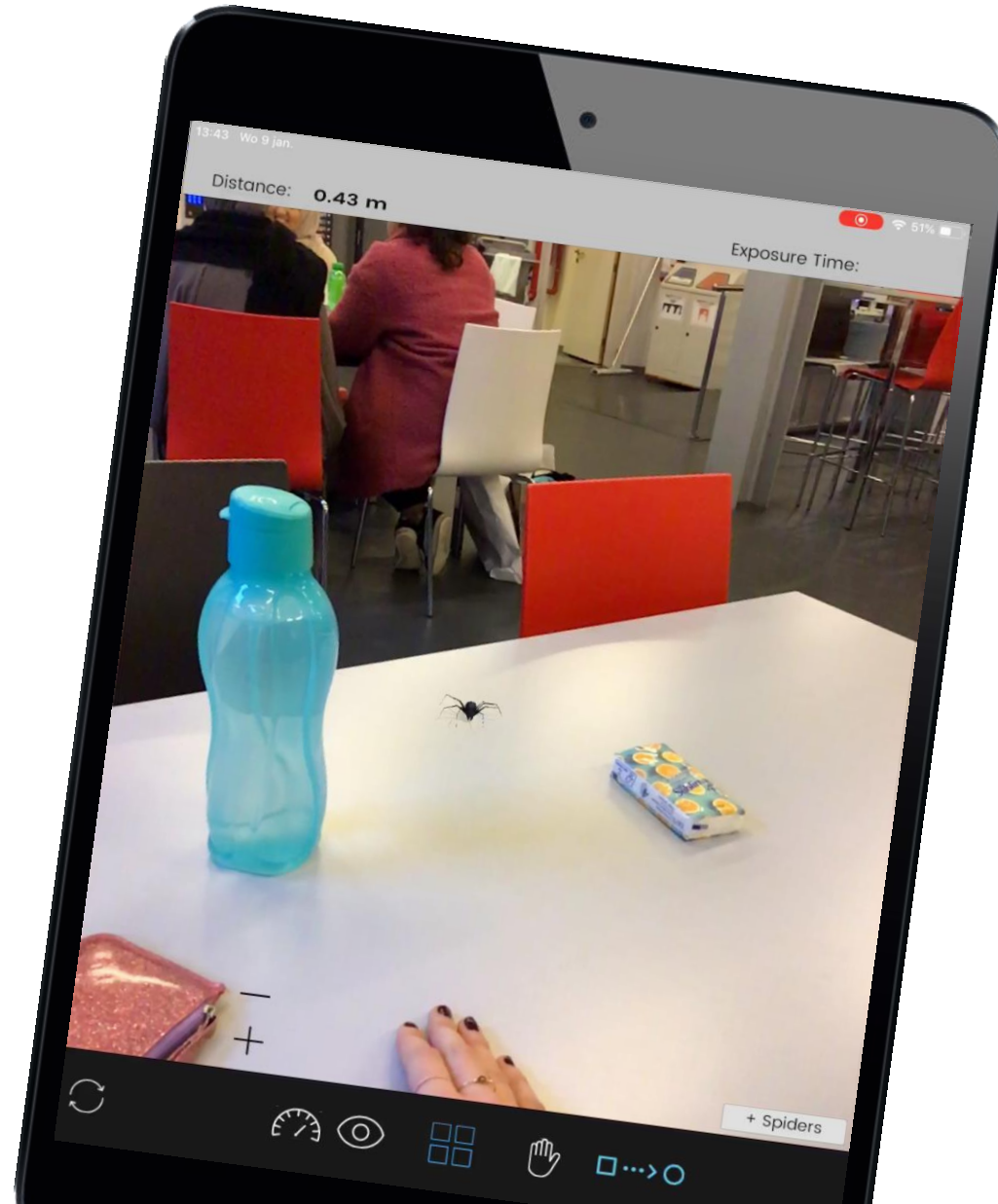
Similar to more established VR, yet also different

Will in time probably be replaced by mixed reality

WHAT IS AR – PHOBOS AR



WHAT IS AR – PHOBOS AR



THE STUDY – AIMS DISCUSSED TODAY

Explore potential of iOS application Phobos AR, first markerless smartphone app for animal phobia treatment

1. Evaluate whether it could elicit feelings of anxiety in a non-clinical population when performing behavioural approach tasks (BATs)

hypothesis: yes 😊

2. Explore whether screen size (iPhone versus iPad) impacted self-reported anxiety severity

hypothesis: iPad > iPhone

THE STUDY – METHOD

Participants

- 111 students
- 19 ($SD = 3.06$, range = 17-40) years of age
 - 25 men, 85 woman, 1 non-binary

Randomly assigned to 1 of 2 conditions

- iPhone (N = 55) or iPad (N = 66)
- Animal of their choosing, for which they could not be phobic

THE STUDY – METHOD

1 week before experiment: online survey

- Specific phobia
(Severity Measure for Specific Phobia-Adult; Craske et al., 2013)

During experiment

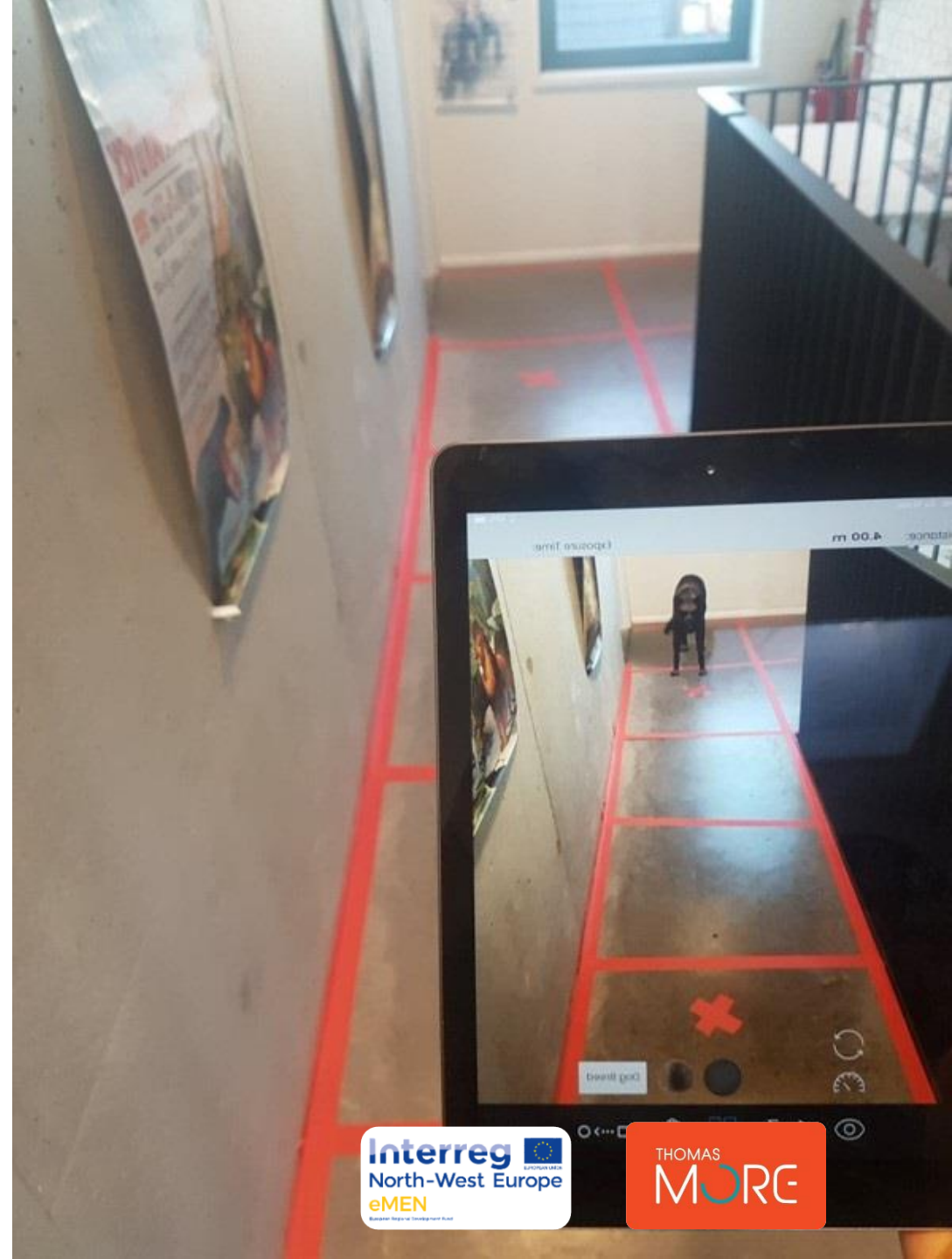
- Self-reported anxiety (on a scale of 1 – 10)

THE STUDY – PROCEDURE

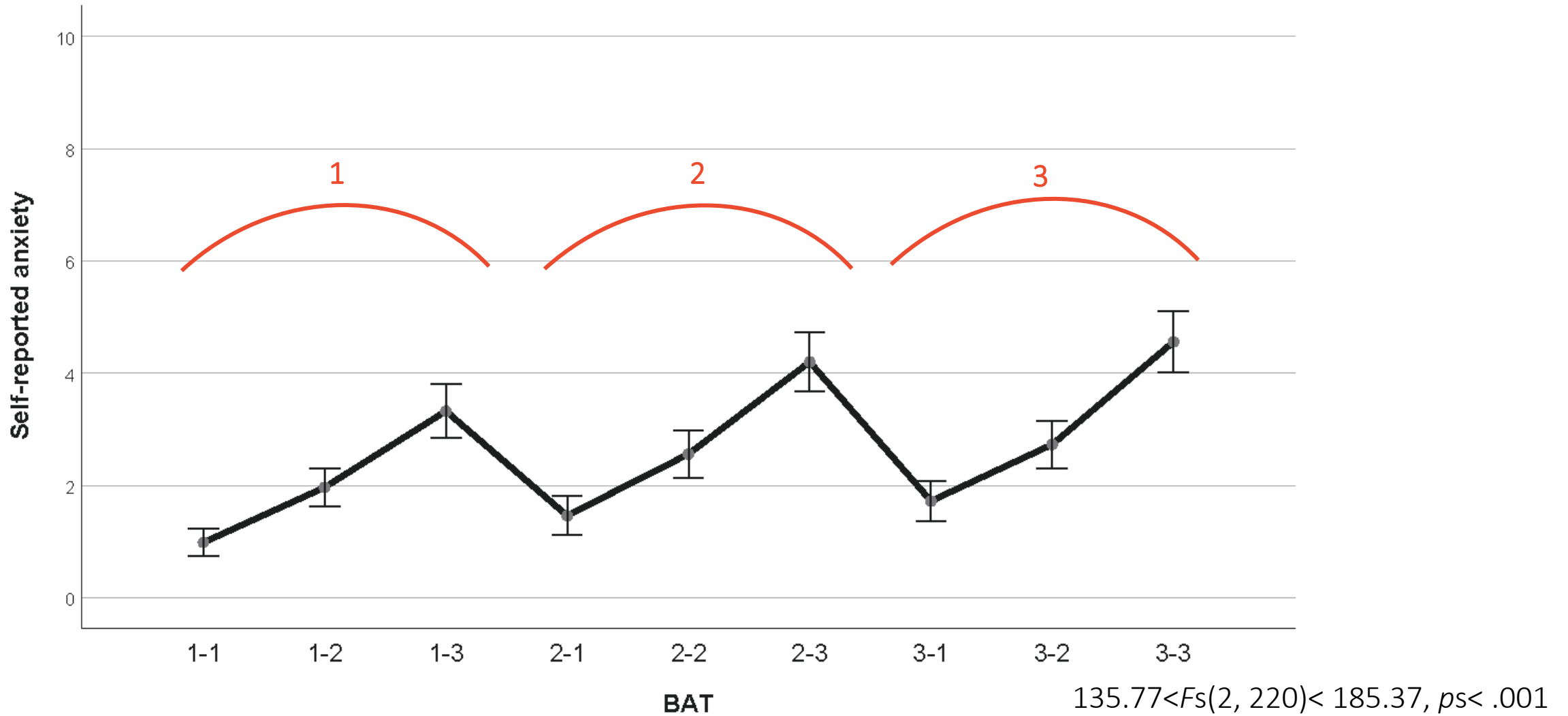
Animal of their choosing
(controlled for in the analyses)

3 discrete BATs

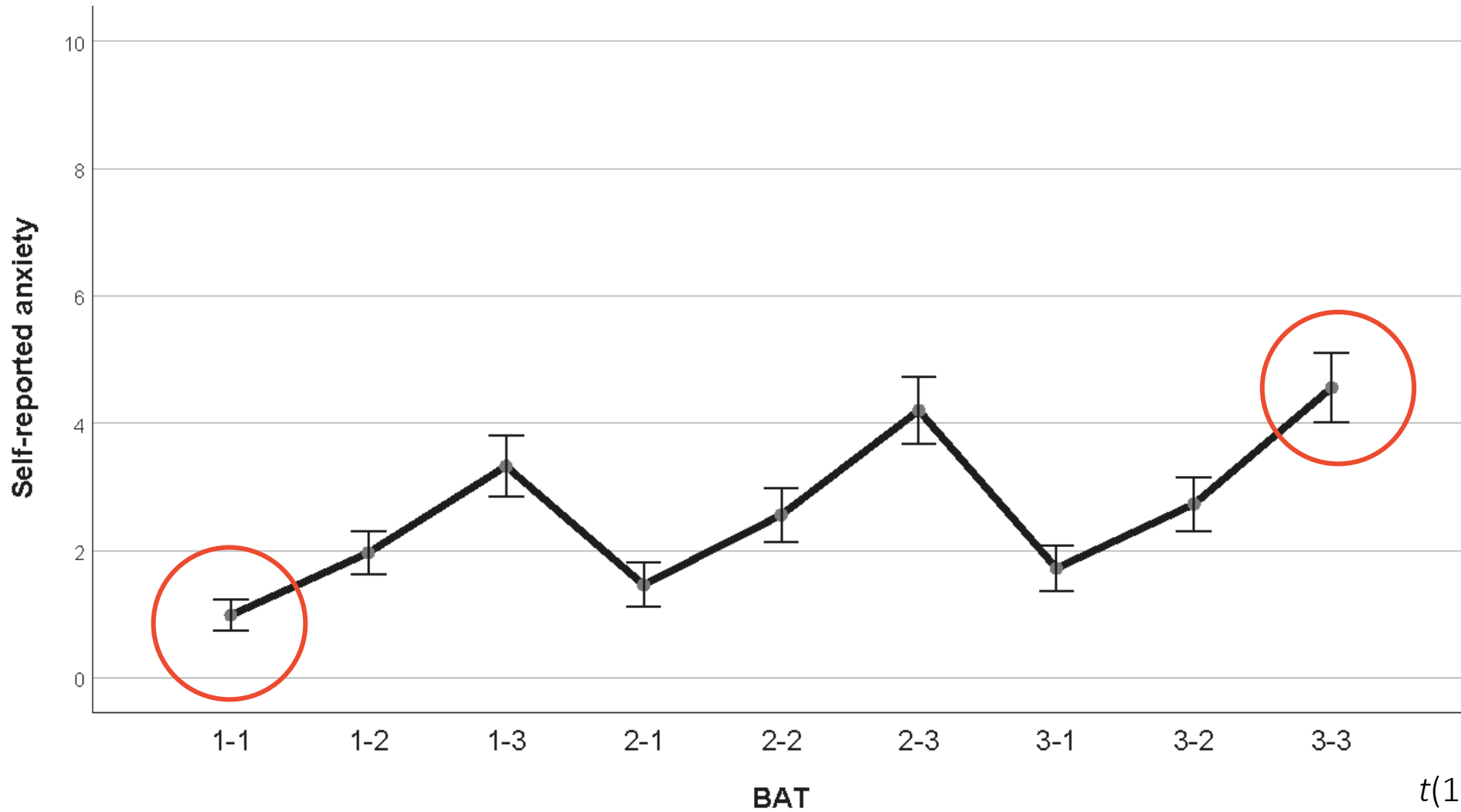
Given the absence of specific phobia,
focus on self-reported anxiety, rather
than amount of successful steps



THE STUDY – RESULTS

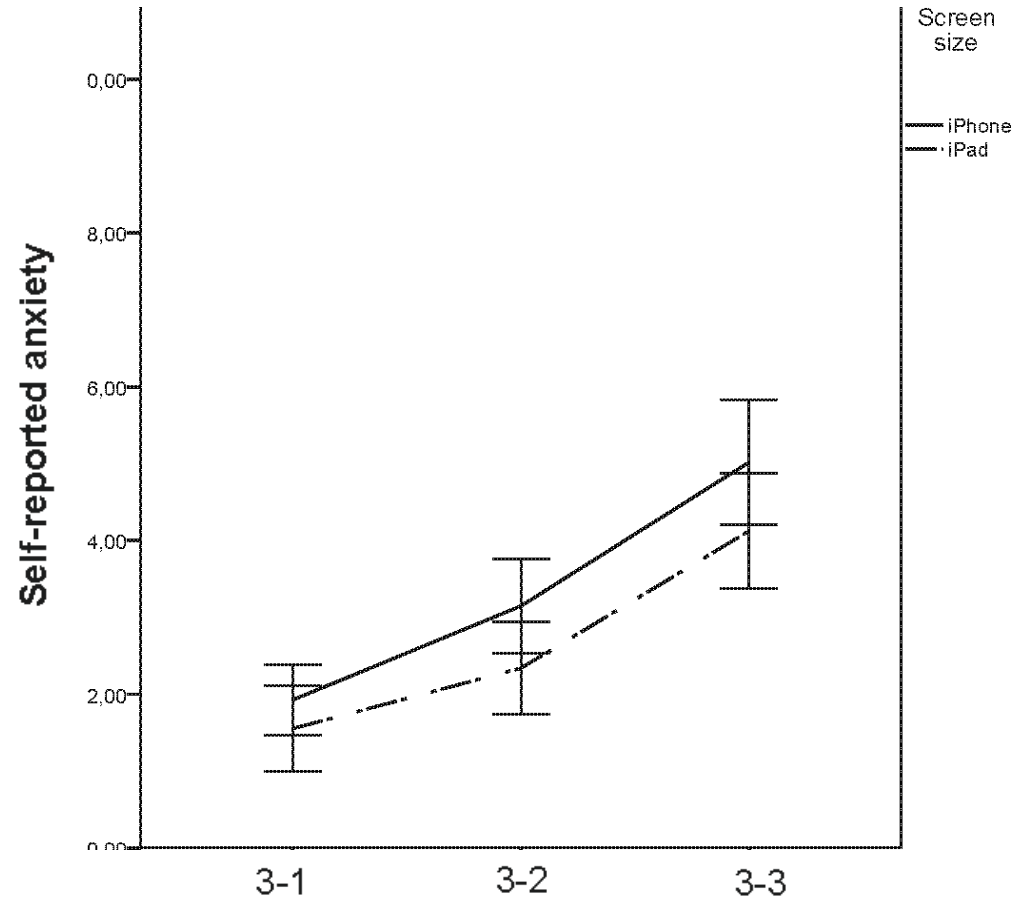


THE STUDY – RESULTS



$t(1,110)=16.15, p<.001$

THE STUDY – RESULTS



$F(1.32,216)=1.74, p = .19$

CONCLUSION & NEXT STEPS

An AR application is able to induce self-reported anxiety in a non-clinical population.

Increasing screen size does not seem to (straightforwardly) influence self-reported anxiety

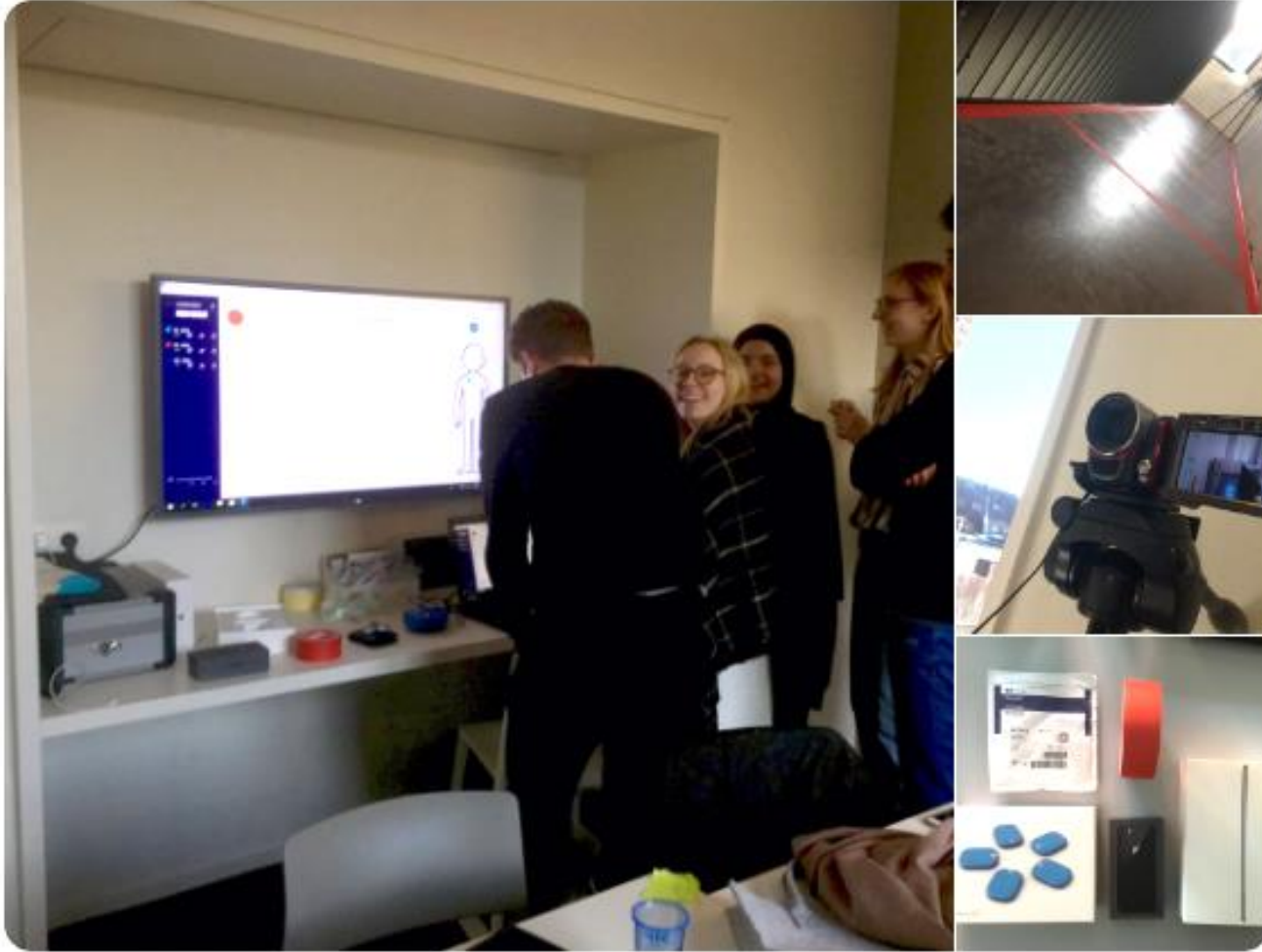
But distance to screen or ease of use?

CONCLUSION & NEXT STEPS

Given that basis principle seems to be valid,
how does this translate to a clinical population?

And how does it compare to existing techniques?

CONCLUSION & NEXT STEPS



*It's been
a team effort*



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