



**GAMES FOR HEALTH**  
EUROPE

**DISCLOSURE SLIDE**  
for presentations at the

**GAMES FOR HEALTH EUROPE 2025 CONFERENCE**

I herewith confirm that there is not any conflict of interest with the conference organization or any of its sponsors.



# How Pinball Play Supports Wellbeing

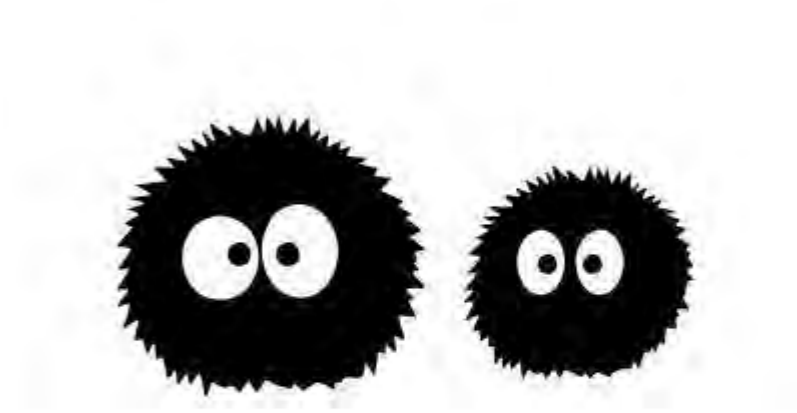
**Dr. ing. S.C.J. (Sander) Bakkes**

Assistant Professor in Playful Learning & Game Design

Utrecht University, The Netherlands



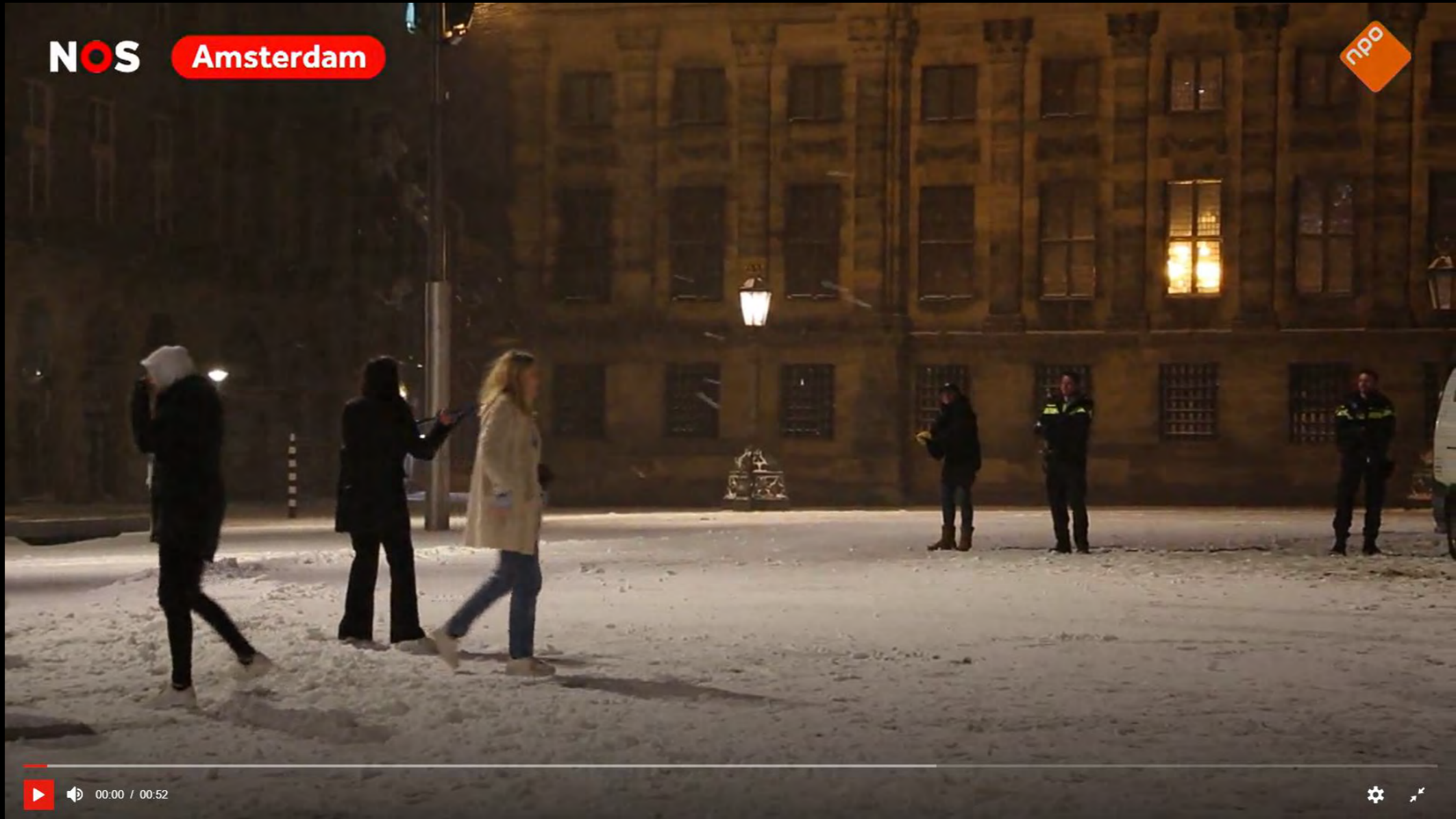
“When is it ok to throw  
things at the **Police**...??”





NOS

Amsterdam



00:00 / 00:52

















TEDx

Prof. Peter Gray. *The Decline of Play*. TEDxNavesink

<https://youtu.be/Bg-GEzM7iTk>



**WAT ER OOK  
SPEELT  
IN EEN LAND**

**LAAT HET  
VOORAL DE  
KINDEREN ZIJN**

*Loesje*

POSTBUS 1045 6801 BA ARNHEM

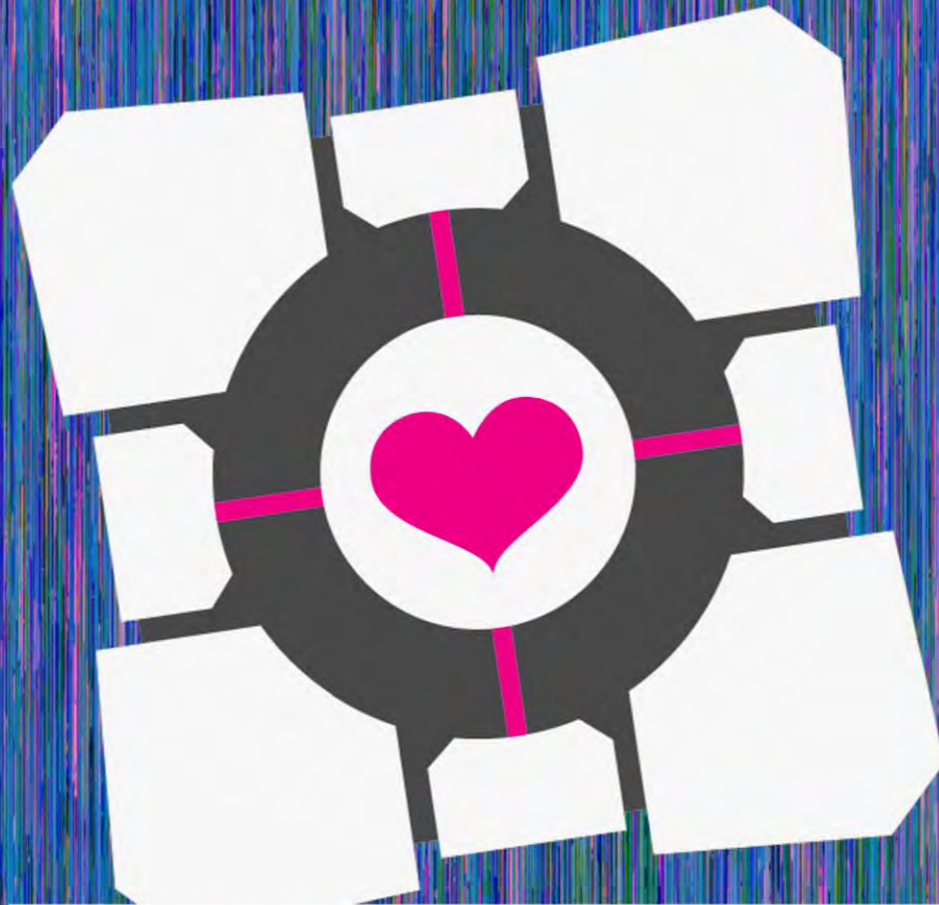


# Play research line at Utrecht University...

*...investigating the positive  
effects of play on (mental)  
health and wellbeing*







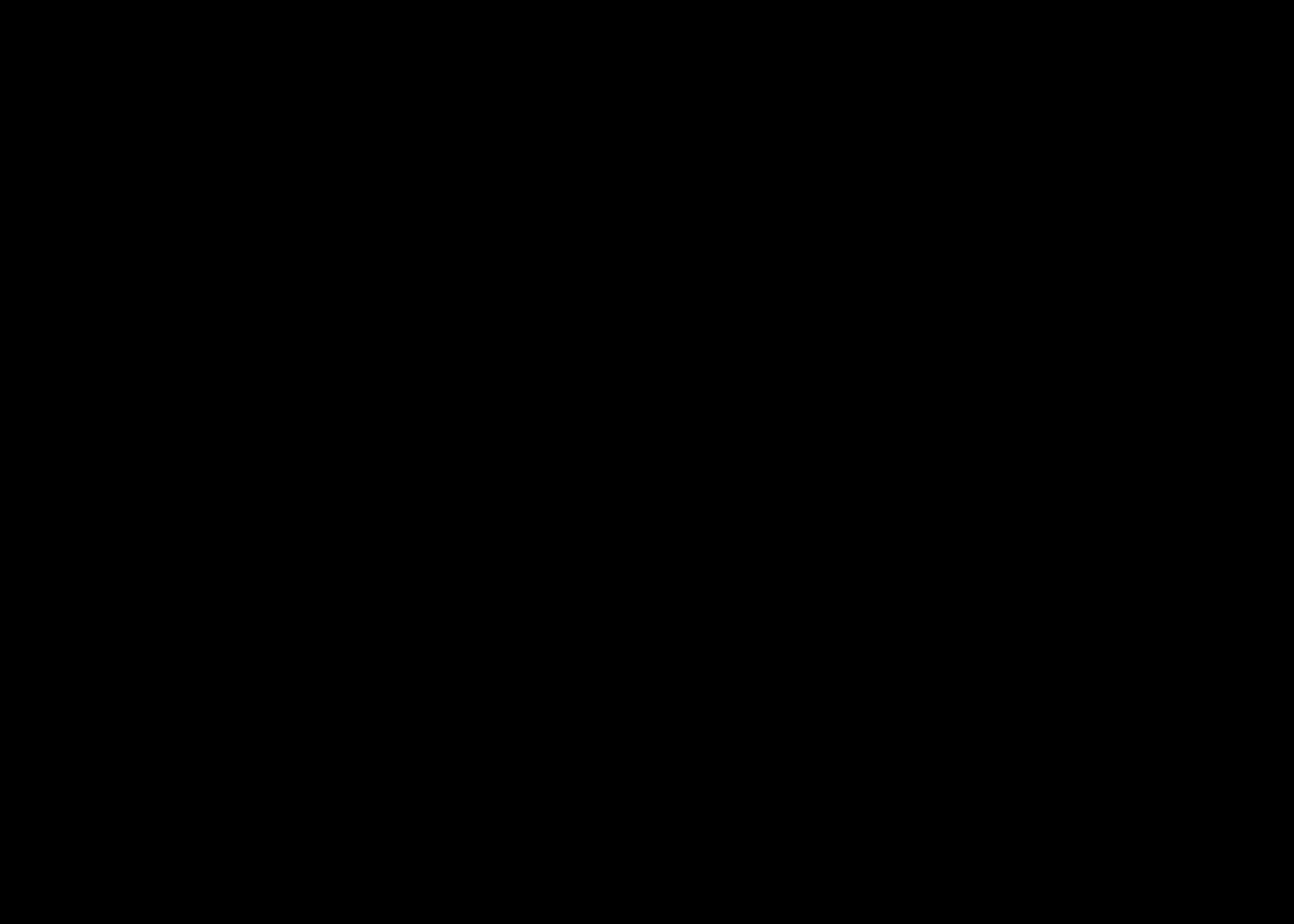
PLAY LAB  
UTRECHT UNIVERSITY

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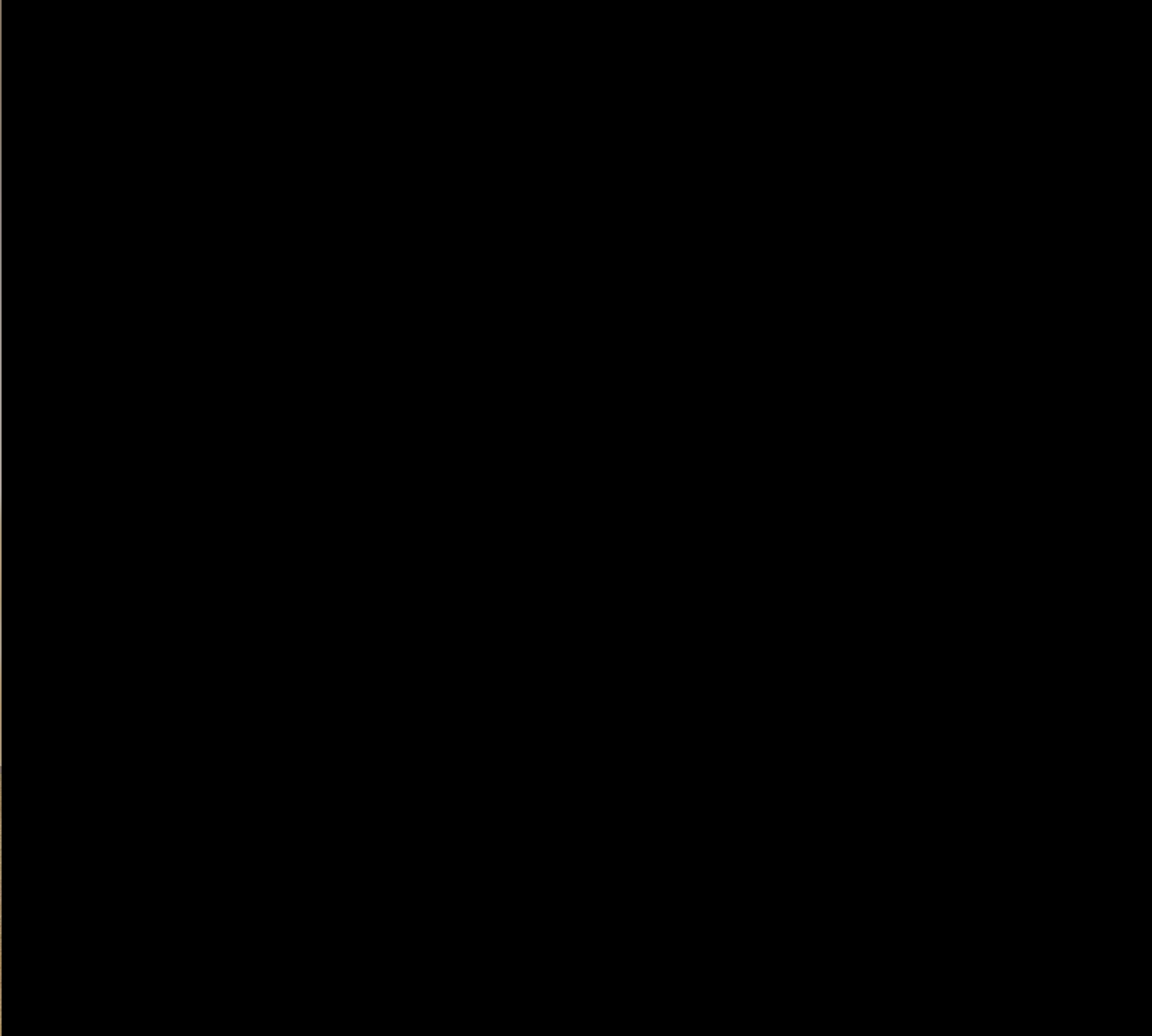
INVESTIGATING THE POSITIVE EFFECTS OF PLAY ON  
(MENTAL) HEALTH AND WELLBEING

WANT TO KNOW MORE?

CONTACT: DR. ING. S.C.J. (SANDER) BAKKES



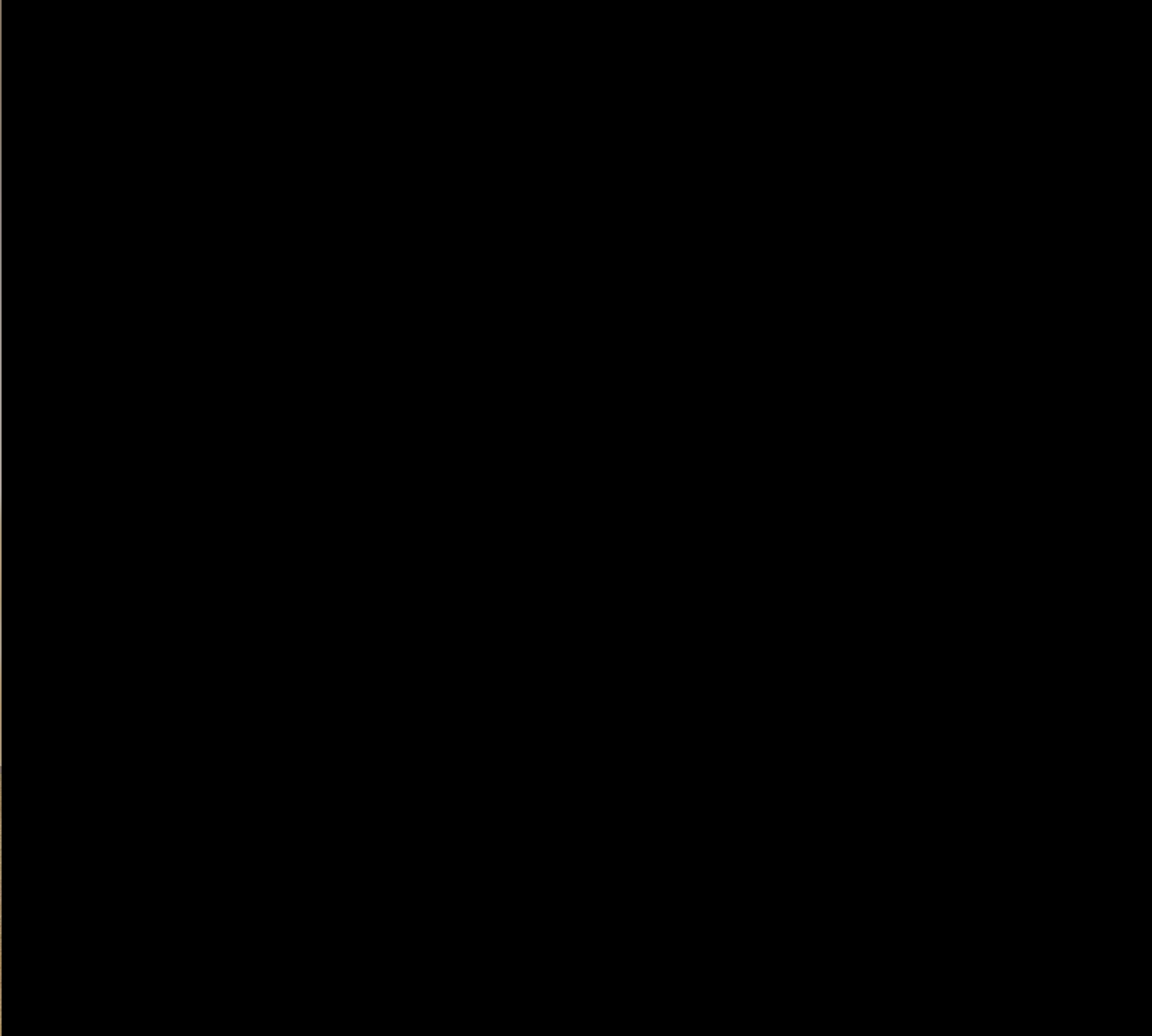
















About these pinball machines...

We are investigating...

- The positive effects of play on children's mental health.
- The psychology of experiential learning.
- The relationship between play & cognitive, emotional, social, and physical development.
- The role of role-play during a world play.

The research is currently being led by the University of Exeter, in partnership with the British Pinball Association and the Pinball Museum, Exeter.

High Score Reached	
123,456,789	
123,456,789	123,456,789
123,456,789	123,456,789

JURASSIC PARK

THE MANDALORIAN





# Shoulder-to-Shoulder: How Pinball Supports Men's Wellbeing

DANIEL JOHNSON, Queensland University of Technology, Australia

KATELYN WILEY, University of Saskatchewan, Canada

CALE PASSMORE, University of Saskatchewan, Canada

ELLA HORTON, University of Tasmania, Australia

ROGER ALTIZER, University of Utah, USA

REGAN L. MANDRYK, University of Saskatchewan, Canada

When facing mental health concerns, men seek help less, confront greater stigma in accessing treatment, and experience more severe consequences. Interventions targeted at men are often grounded in activity and situated in appealing contexts, such as sporting or gaming spaces. In this paper, we question how pinball—a social tangible and digital leisure activity—can support men's mental health and wellbeing, through thematic analysis of in-depth semi-structured interviews (n=15) with male pinball enthusiasts. Our contribution is threefold: first, we evidence pinball as a context that provides incidental benefits to mental health directly, and indirectly through social connectedness; second, that enthusiasts actively enhance their social lives and resulting wellbeing via pinball; and third, that pinball contexts are suited for designing interventions that provide mental health supports within subcultures that appeal to men. We situate our findings in theories of wellbeing, activity-based communication, shoulder-to shoulder self-disclosure, and the importance of third-spaces for social wellness.

CCS Concepts: • **Human-centered computing** → **Empirical studies in HCI**; • **Applied computing** → **Computer games**; • **Software and its engineering** → **Interactive games**.

Additional Key Words and Phrases: pinball, wellbeing, social play, games, men's health

## ACM Reference Format:

Daniel Johnson, Katelyn Wiley, Cale Passmore, Ella Horton, Roger Altizer, and Regan L. Mandryk. 2022. Shoulder-to-Shoulder: How Pinball Supports Men's Wellbeing. *Proc. ACM Hum.-Comput. Interact.* 6, CHI PLAY, Article 251 (October 2022), 25 pages. <https://doi.org/10.1145/3549514>

## 1 INTRODUCTION

Approximately one in two people will experience a mental health issue in their life [6, 7]. In addition to the generic barriers to accessing mental health treatment (e.g., lack of therapists, access to insurance, geographical access geography or income [51, 63]), there are issues specific to men that prevent





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# Our research...

- *Play & Self-Disclosure*
- *Play & Social Anxiety*
- *Play & Experiencing Failure*
- *Play & Eye Gaze*
- *Play & Stress Resilience*

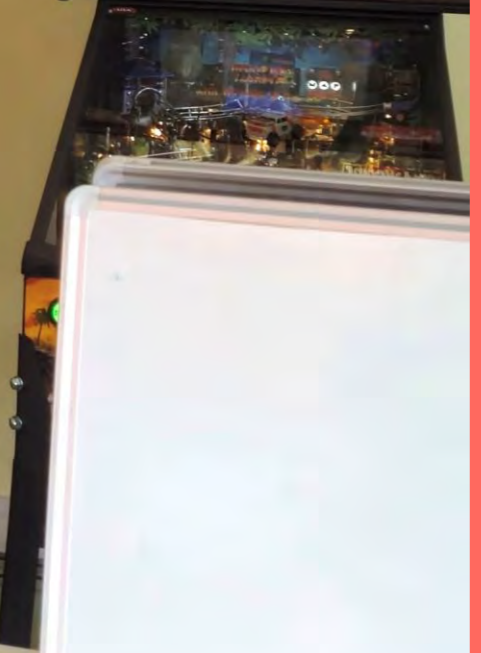


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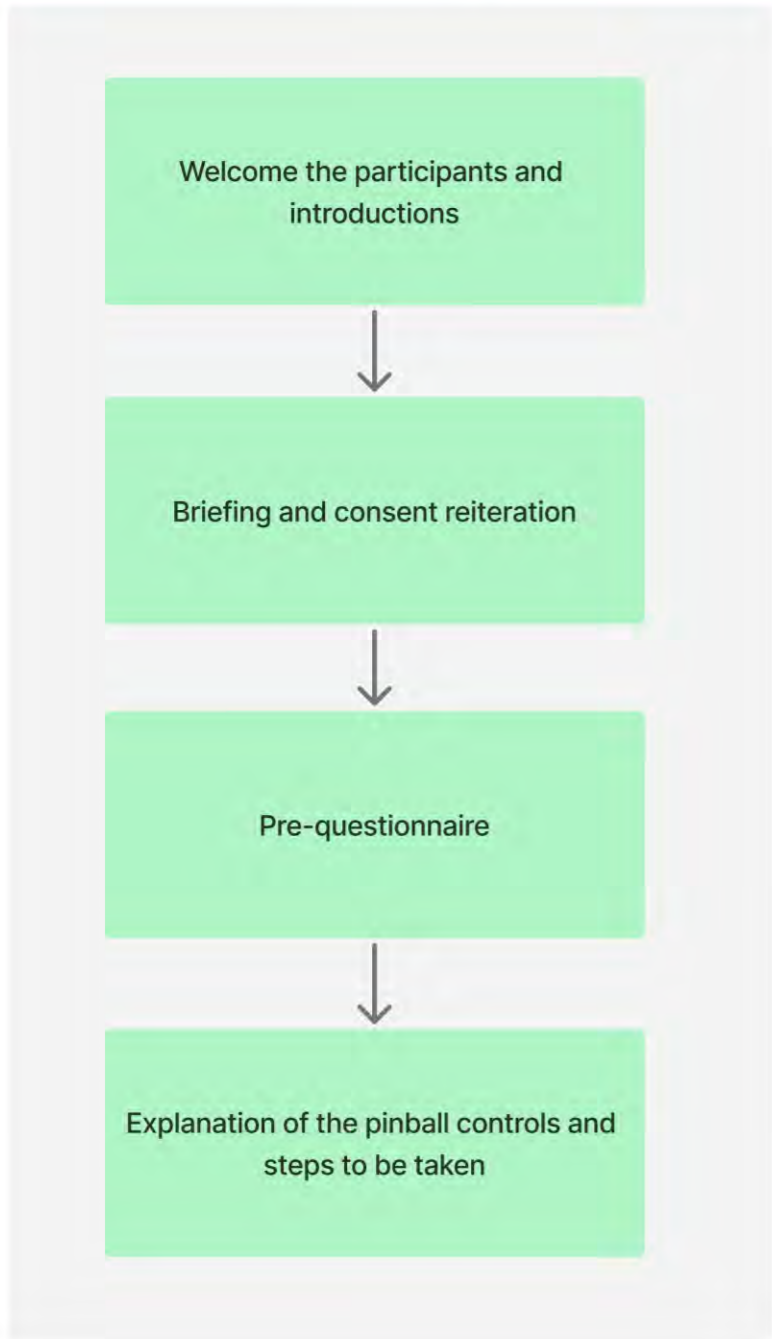






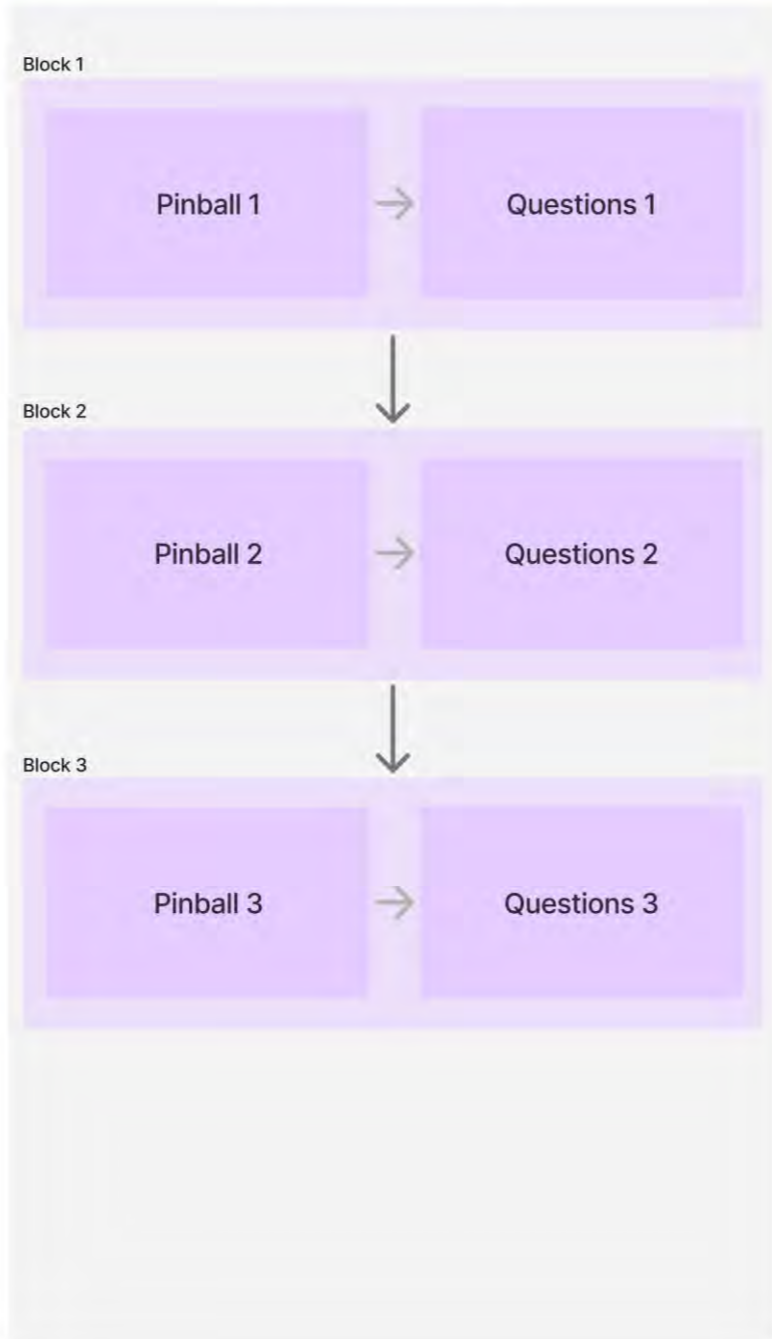
Phase 1: 10-15 minutes

## Opening



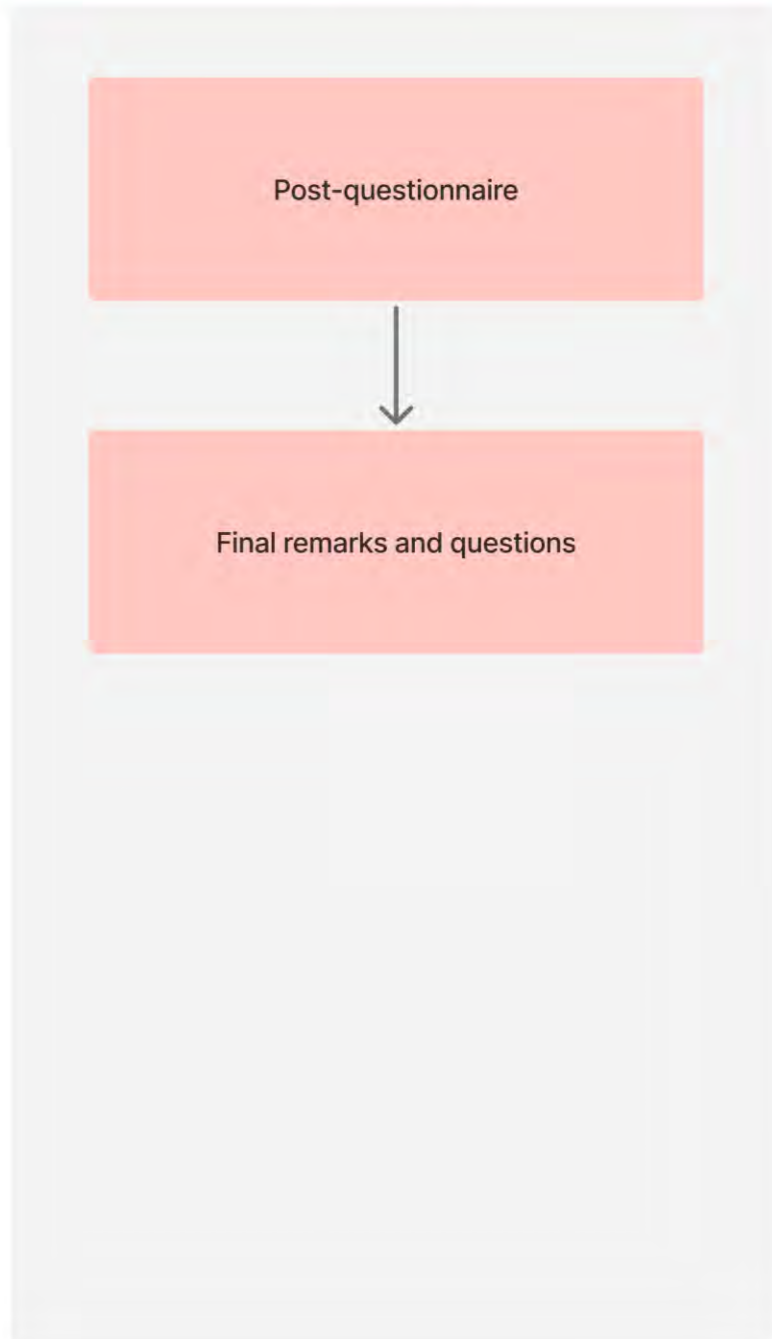
Phase 2: 20-40 minutes

## Experiment

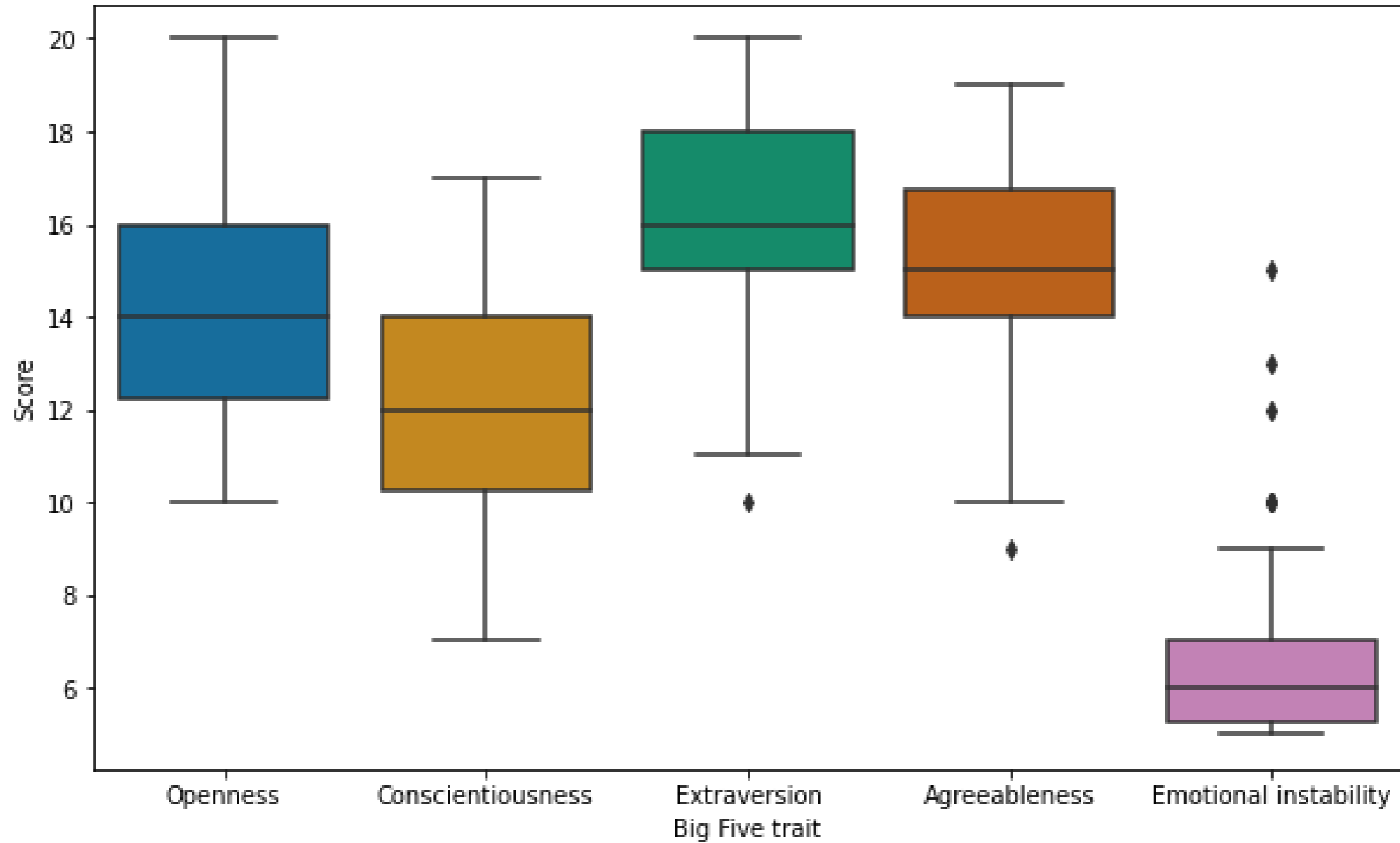


Phase 3: 10-15 minutes

## Closing

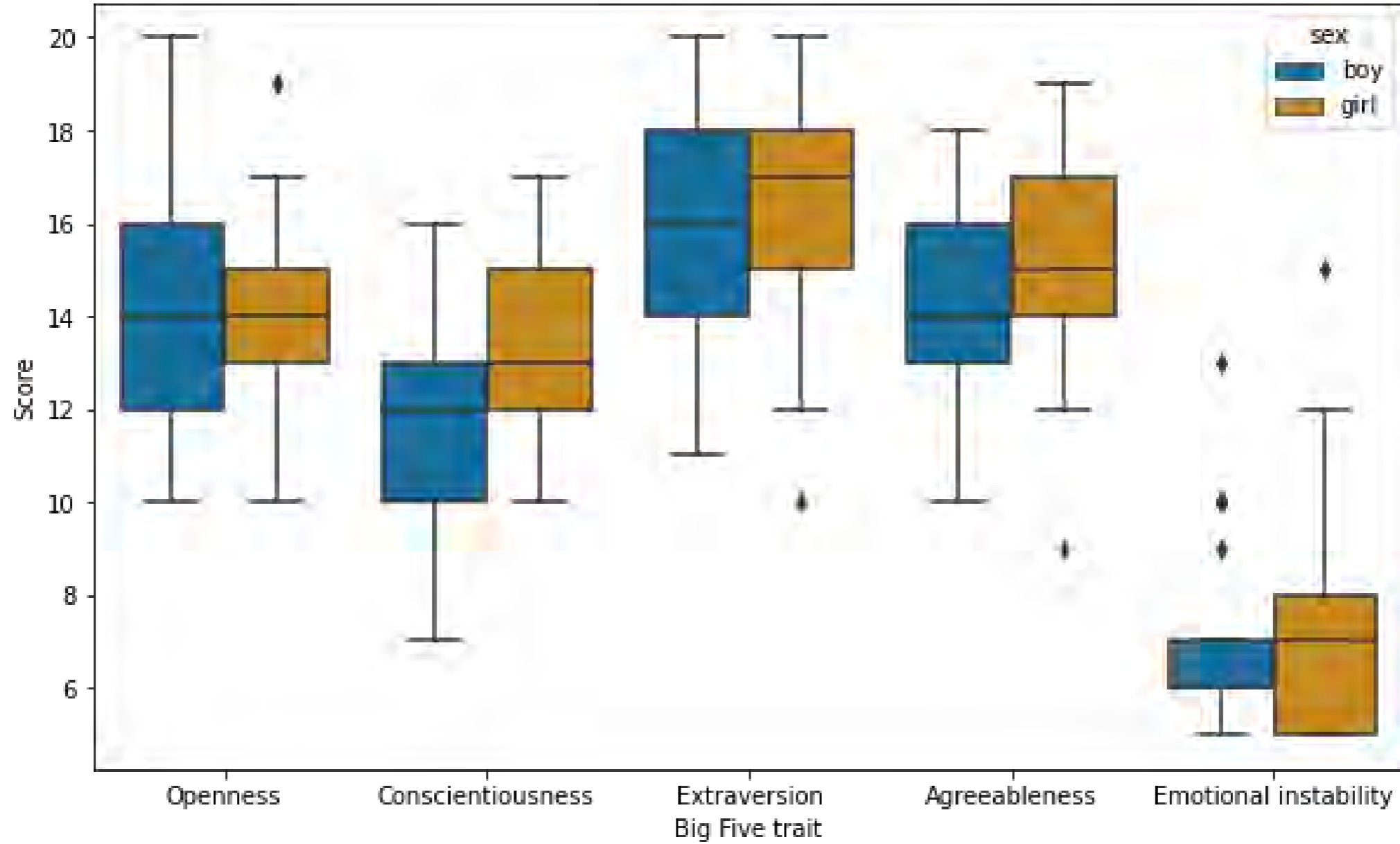


Big Five Questionnaire

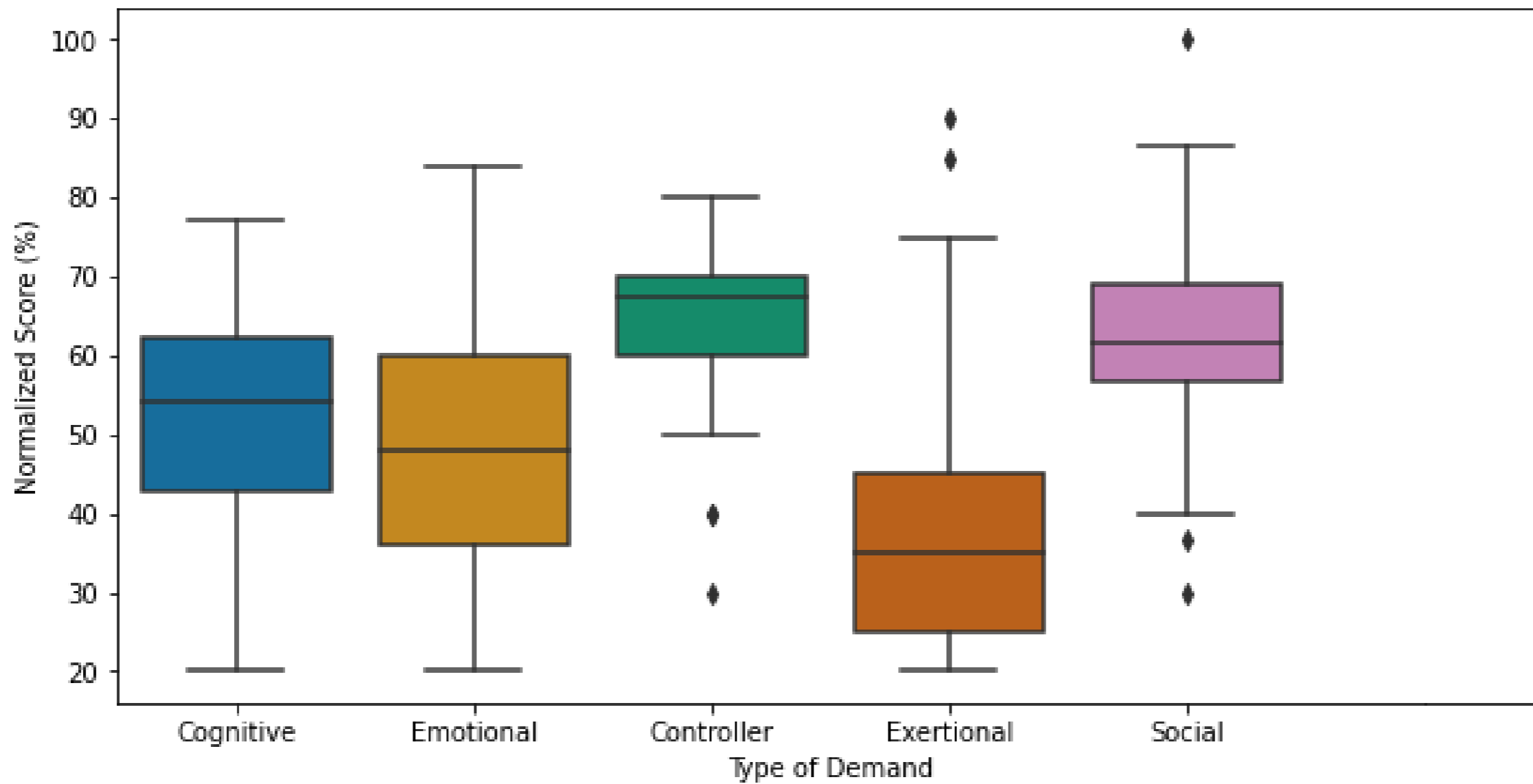




Big Five Questionnaire seperated by biological sex

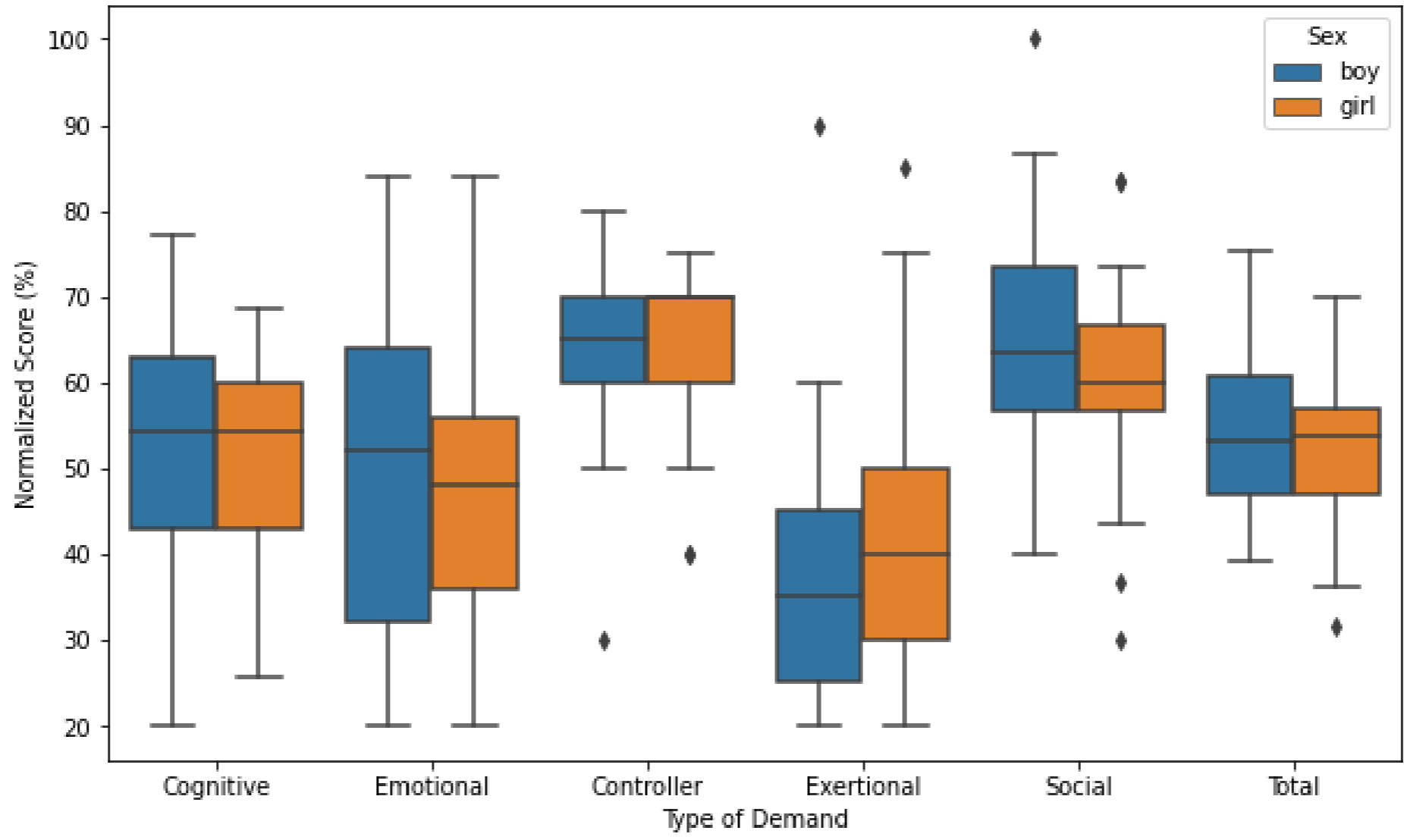


Normalized VGDS Scores

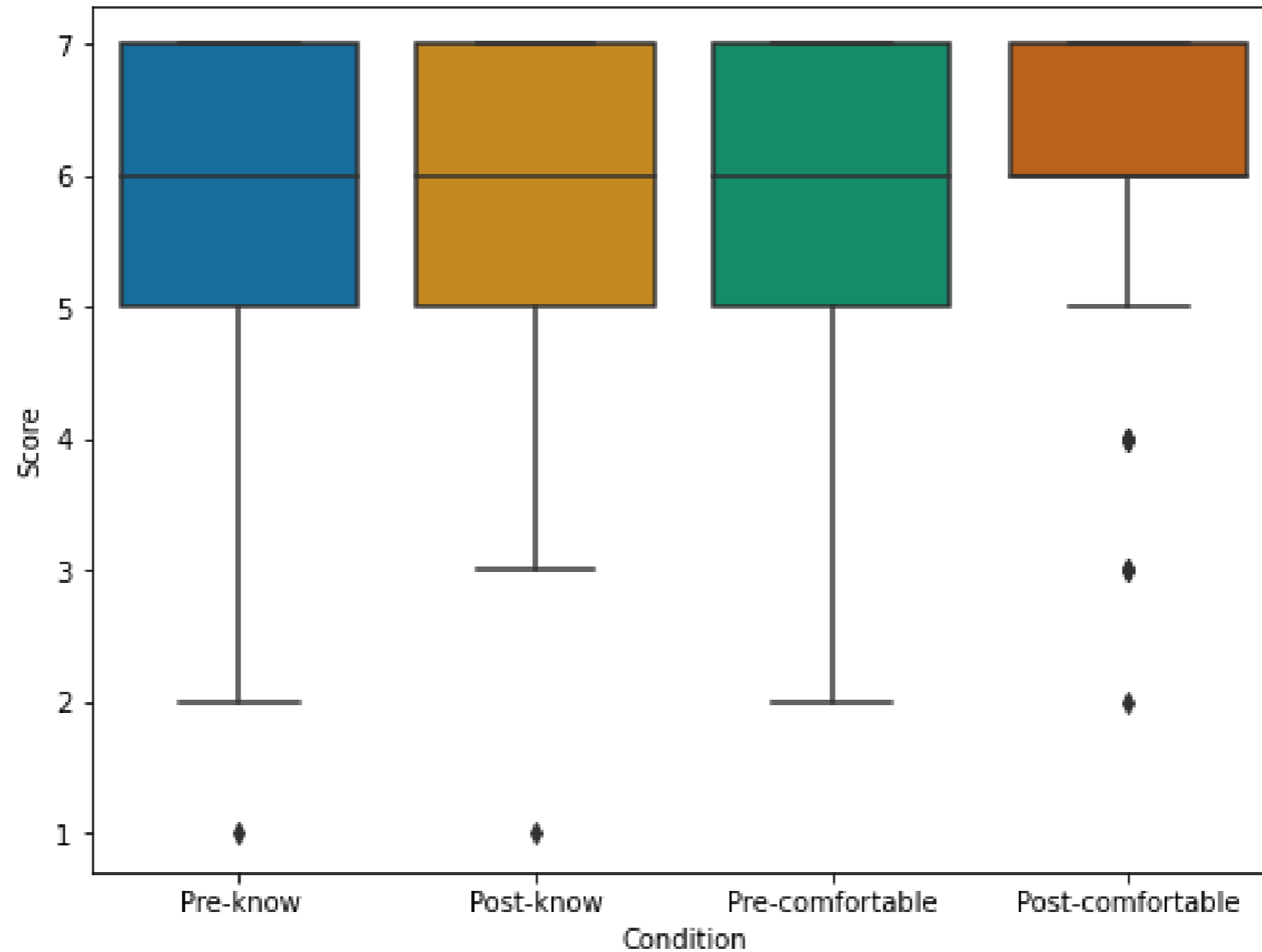




Normalized VGDS Scores



How well do you know the other person / how comfortable are you with the other person

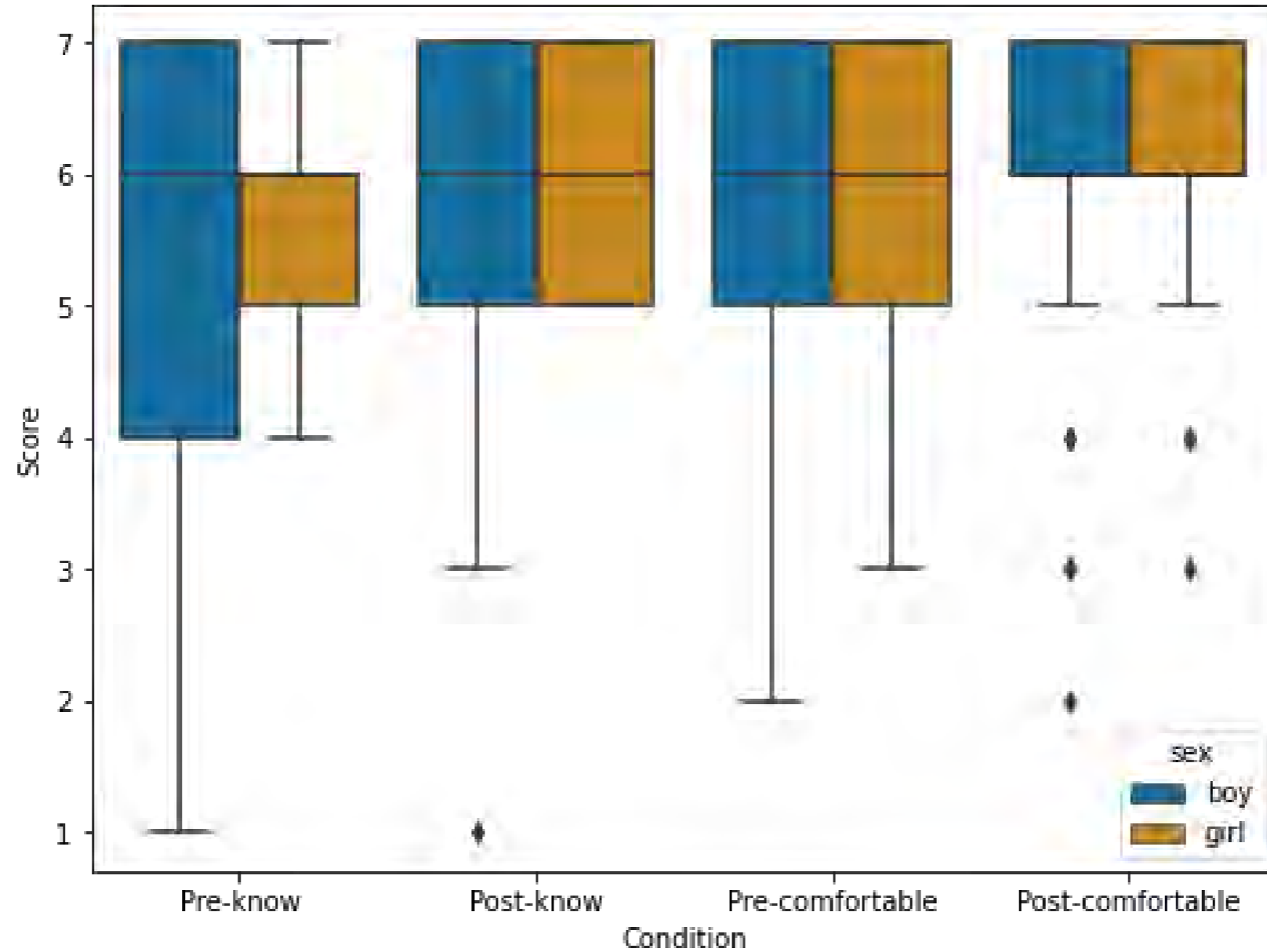


Wilcoxon signed-rank test, P-value (*Knowing*): 0.0169

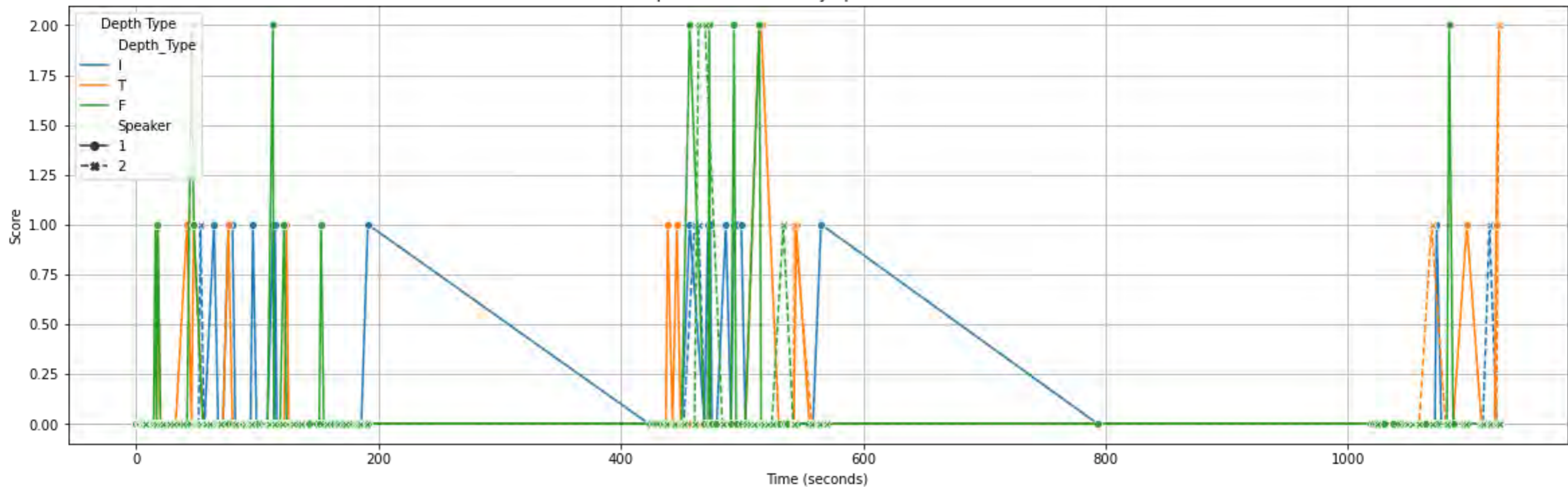
Wilcoxon signed-rank test, P-value (*Comfortable*): 0.0316



How well do you know the other person / how comfortable are you with the other person



Depth Scores (I, T, F) by Speaker and Session





Eh nou... ik denk de juf.

Omdat zij eh... Zij, zij weet niet... Zij... Wij hebben geen lol bij haar, dus...

Ja.

Zelfs mijn ouders vinden haar een poepjuf.

Het is altijd werken, werken, werken.

Het is nooit een spelletje ofzo.

En als we een spelletje hebben, is het al kwart over.

Er was een keer een meisje in mijn straat... en ehm ze was dus buiten gezet door haar moeder... omdat die moeder dus boos op haar was.

En ze was heel verdrietig, ze was heel hard aan het huilen.

En toen had ik haar dus geholpen, omdat ik had op de deur gekleupt ... op de deur geklopt.

En toen had ik zeg maar gezegd van... Ehm... Uw kind is een beetje verdrietig, misschien... Eh... misschien kan je haar even opvrolijken of...

Of even uitleggen wat ze aan haar, wat ze heeft gedaan en dan snapt ze het.

Maar nu is het eigenlijk best wel koud en is ze best wel verdrietig.

Toen was het helemaal goed gekomen.

Die mevrouw was ook helemaal niet boos en dat kind was heel blij.

Dus dat vond ik wel goed.



Nee, voor spinnen, voor naaktslakken en...

Maar ik ben ook heel erg bang voor dat mijn opa en oma doodgaan.

Of dat als ik oud ben of zo, dat mijn papa en mama er gewoon niet meer zijn.

Dat klinkt zo raar.

Ik heb namelijk nog nooit meegemaakt dat iemand doodgaat.

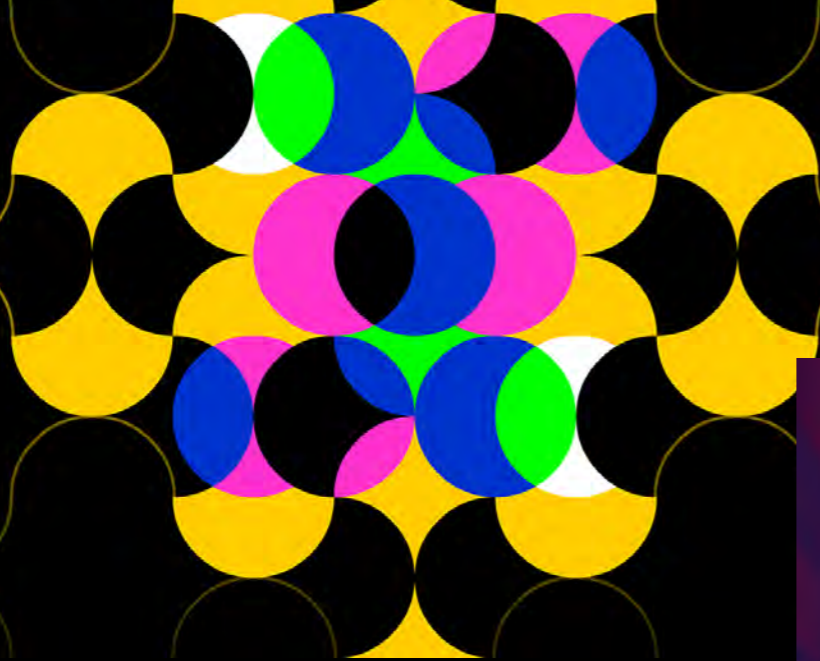
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# BETWETER



# Our research...

- *Play & Self-Disclosure*
- *Play & Social Anxiety*
- *Play & Experiencing Failure*
- *Play & Eye Gaze*
- *Play & Stress Resilience*  
(brain connectivity and network analysis!)















**GALA**

**Games and Learning Alliance Conference 2025**

**November 19-21, Utrecht, The Netherlands**







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## Questions?

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