

Can Virtual Reality Increase Engagement with Physical Activity? Exploring VR Boxing

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Background

1 in 3

adults worldwide don't get enough physical activity

Inactivity raises the risk of

Heart disease

Type 2 diabetes

Some cancers

Knowing isn't doing

Most know exercise is good, but that rarely changes habits

Short on time

Lack of time is a common barrier to exercise

New focus: making exercise feel good, so people keep coming back

(Bird et al., 2026)

Question

Can immersive exergaming make exercise feel better?

Exergaming combines exercise with an interactive game. We compare boxing in virtual reality and mixed reality with a TV control.

Hypothesis: compared with TV, VR and mixed reality will lead to



More pleasure

Feeling Scale



Higher arousal

Felt Arousal Scale



Higher perceived effort

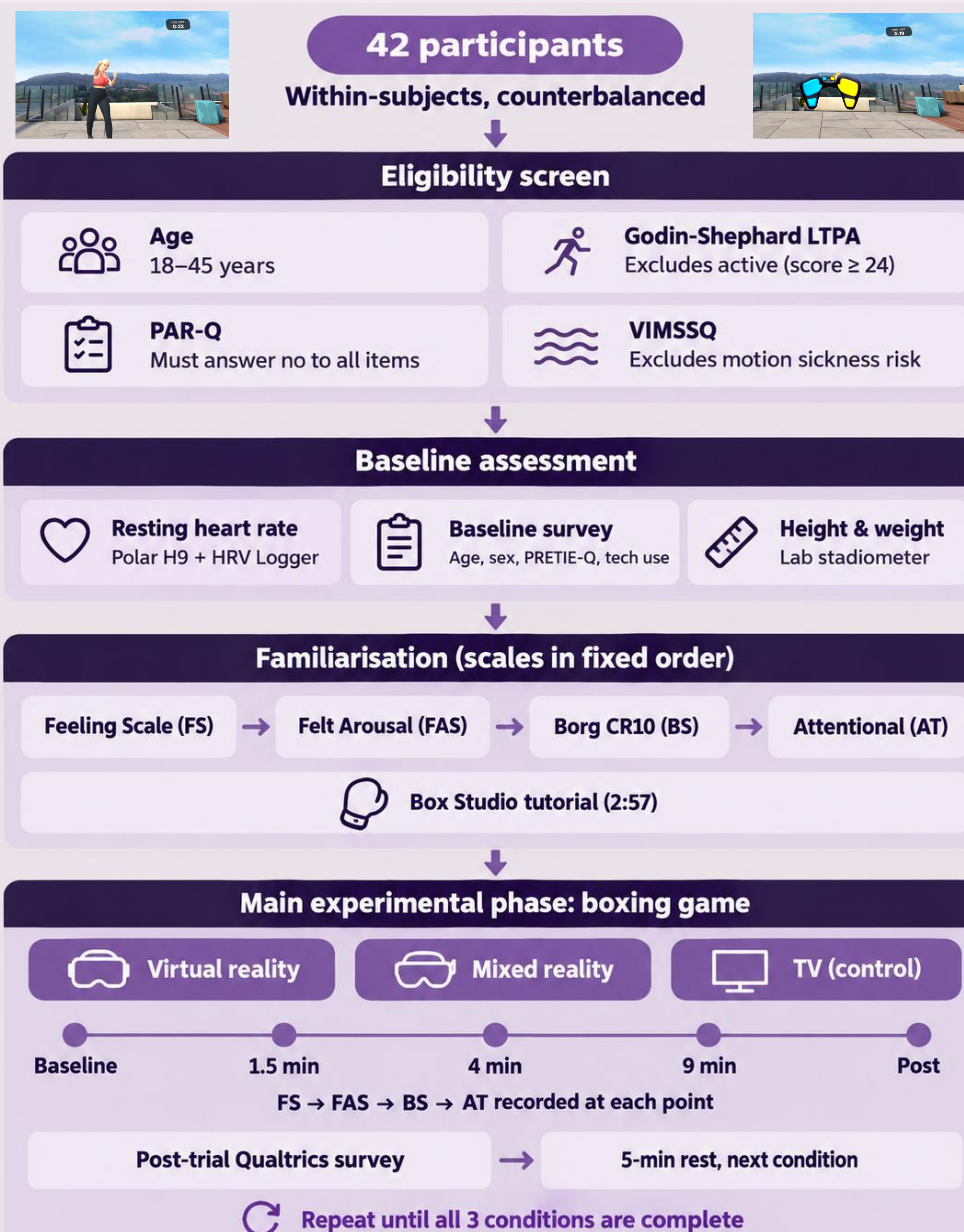
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More external focus

Attentional Scale

Methodology



Previous literature



Exercising with a headset felt more pleasant than watching TV, and VR felt best (Bird et al., 2024).



Immersive technology drew attention away from breathing and fatigue, though effort felt the same.



VR boxing was more fun than a 2D screen, and pleasant exercise may build lasting habits (Bird et al., 2026).

Future work



Test whether benefits last over repeated sessions, beyond the initial novelty.



Study immersive exercise at home and in gyms using activity trackers.



Include older adults and people with long-term health conditions.



Explore lightweight AR glasses for short bursts of everyday activity, like taking the stairs (Bird et al., 2026).

References

- Bird, J. M., Karageorghis, C. I., Jones, L., Harris, D. J., Alharbi, M., & Vine, S. J. (2024). Beyond Rubik: The Embodiment–Presence–Interactivity Cube applied to exercise. *Psychology of Sport and Exercise*, 74, 102684.
- Bird, J. M., Potts, H. W. W., Fisher, A., Mitchell, J. J., Blodgett, J. M., Steed, A., & Hamer, M. (2026). Enhancing affective responses to physical activity with extended reality (XR) technology: Current progress and future roadmap. *Performance Enhancement & Health*, 14, 100441.