

Social exergames mitigating the proximity effects in collaborative physical activity among office workers

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Social Exergames Mitigating the Proximity Effects in Collaborative Physical Activity among Office Workers

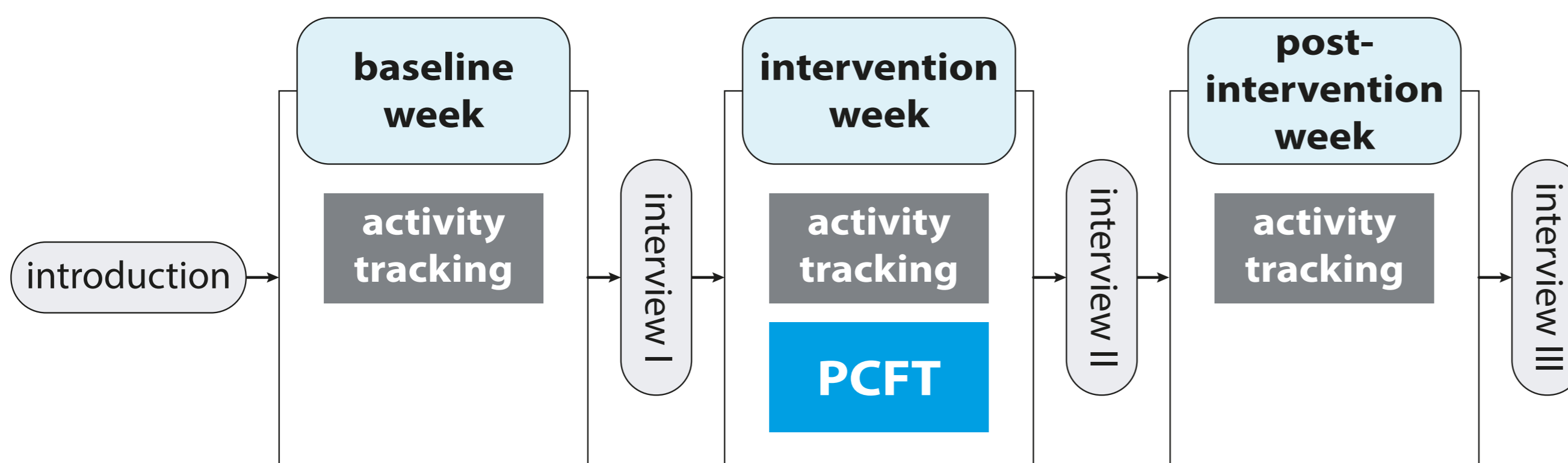
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Background

Promoting physical activity at office work has become increasingly crucial, and challenges designers to create different solutions. One opportunity is leveraging the collaborative nature in the workplace to encourage peer-based physical activity. However, the social effects of peer bonding may be influenced by contextual factors, such as the proximity between co-workers in the office.

The Field Study [1]

First, we conducted a field-study consisting of three weeks to understand the proximity effects in peer-based collaborative physical activity. The study involved 10 pairs of co-workers (5 distributed vs. 5 co-located) using mi-band to facilitate a collaborative step goal. We collected daily steps, collaborative goals, and interview data.



An overview of the study process

Our findings:

- Collaborative physical activity had a significant effect on participants' daily steps $F(2, 36) = 3.463, p < 0.05$.
- The close proximity positively affected the adoption of peer-based collaborative physical activity. $F(2, 36) = 6.143, p < 0.01$.

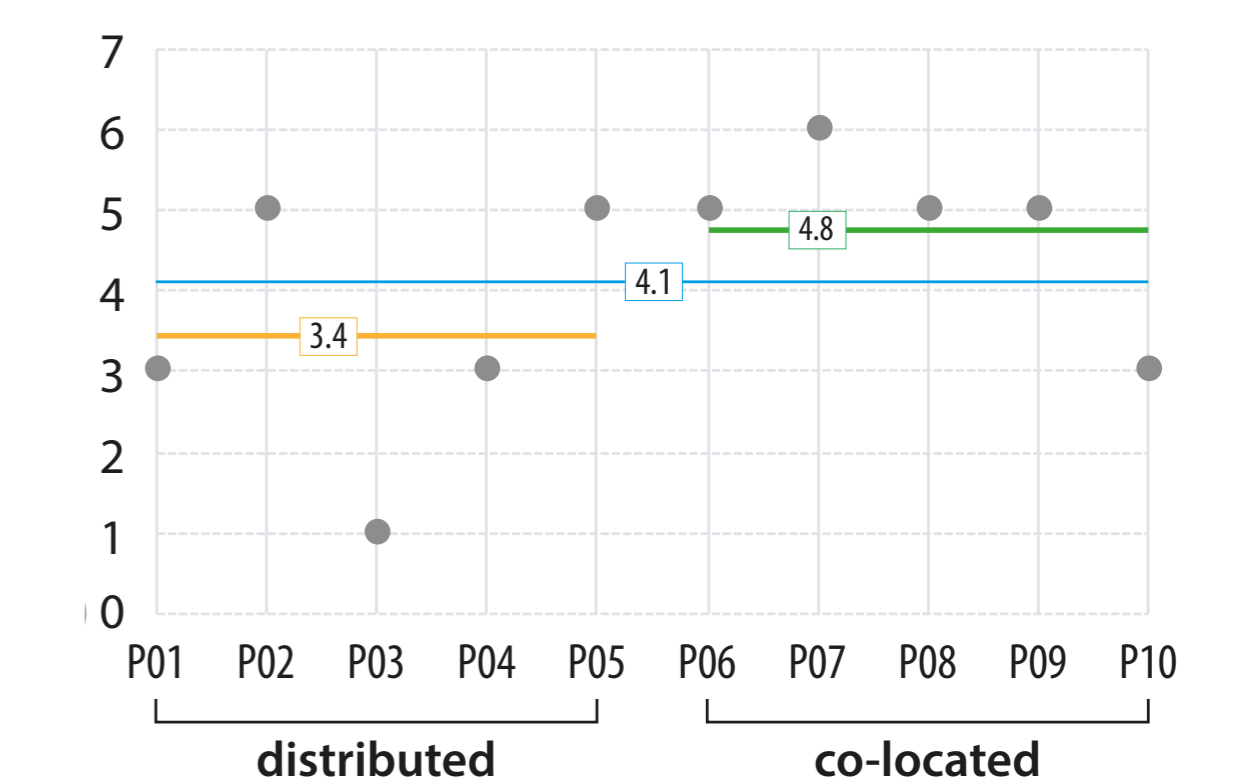
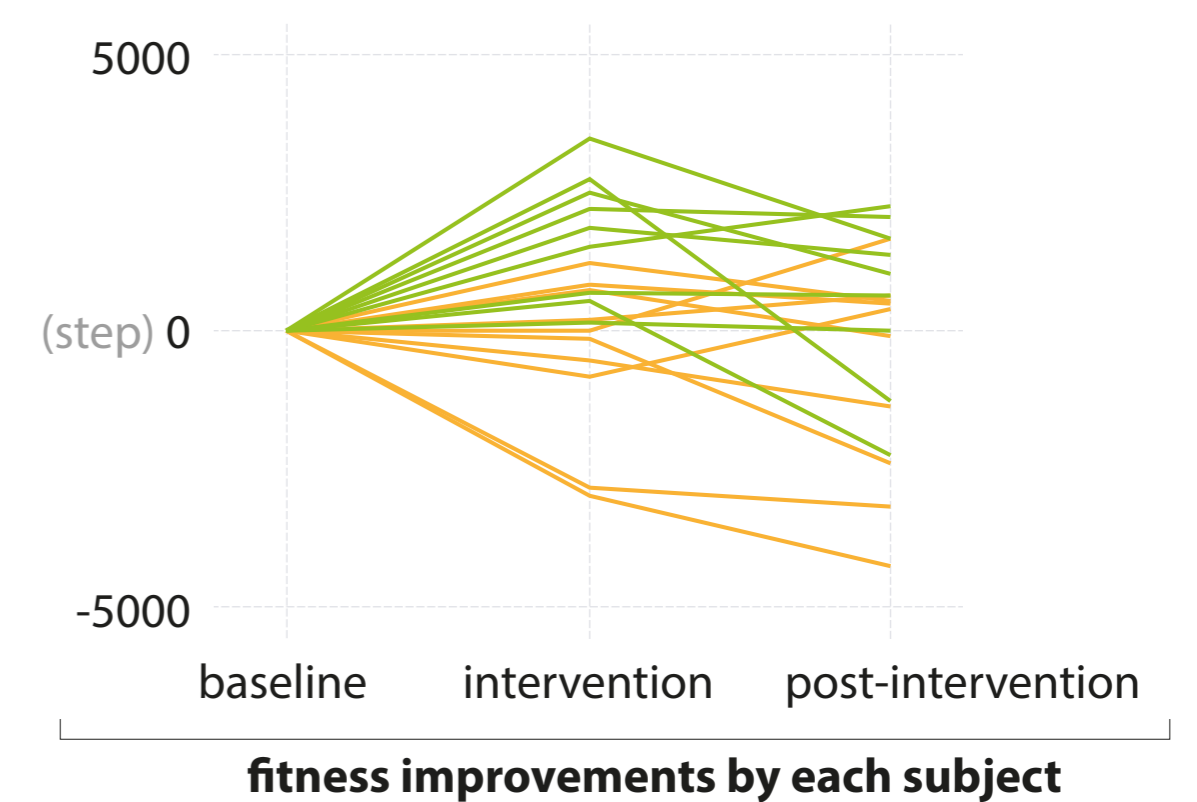
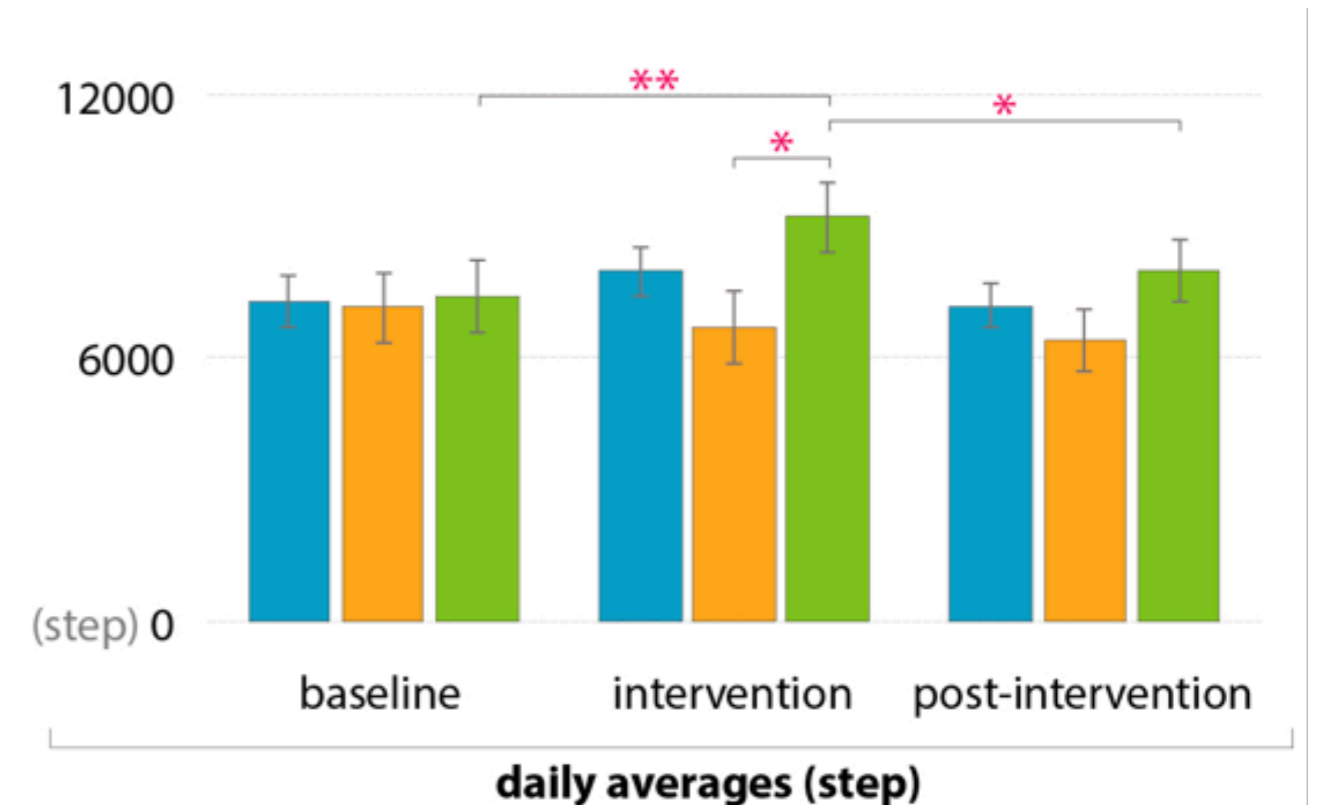
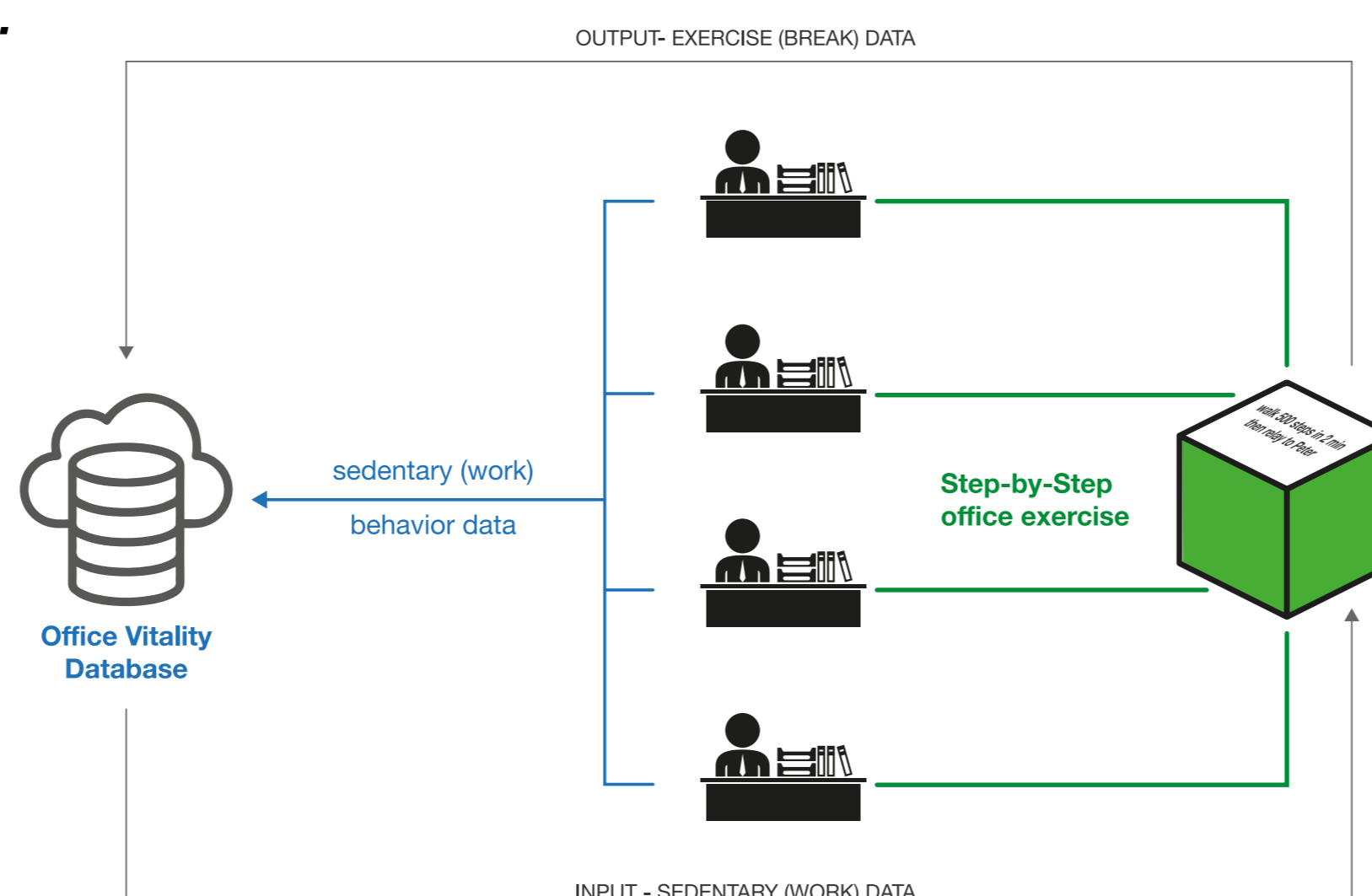
The Design Case Study [2]

The study resulted in a set of design insights into developing social exergames to increased office vitality. To demonstrate the applicability of our research insights, we present one student design example, called *Step-by-Step*.

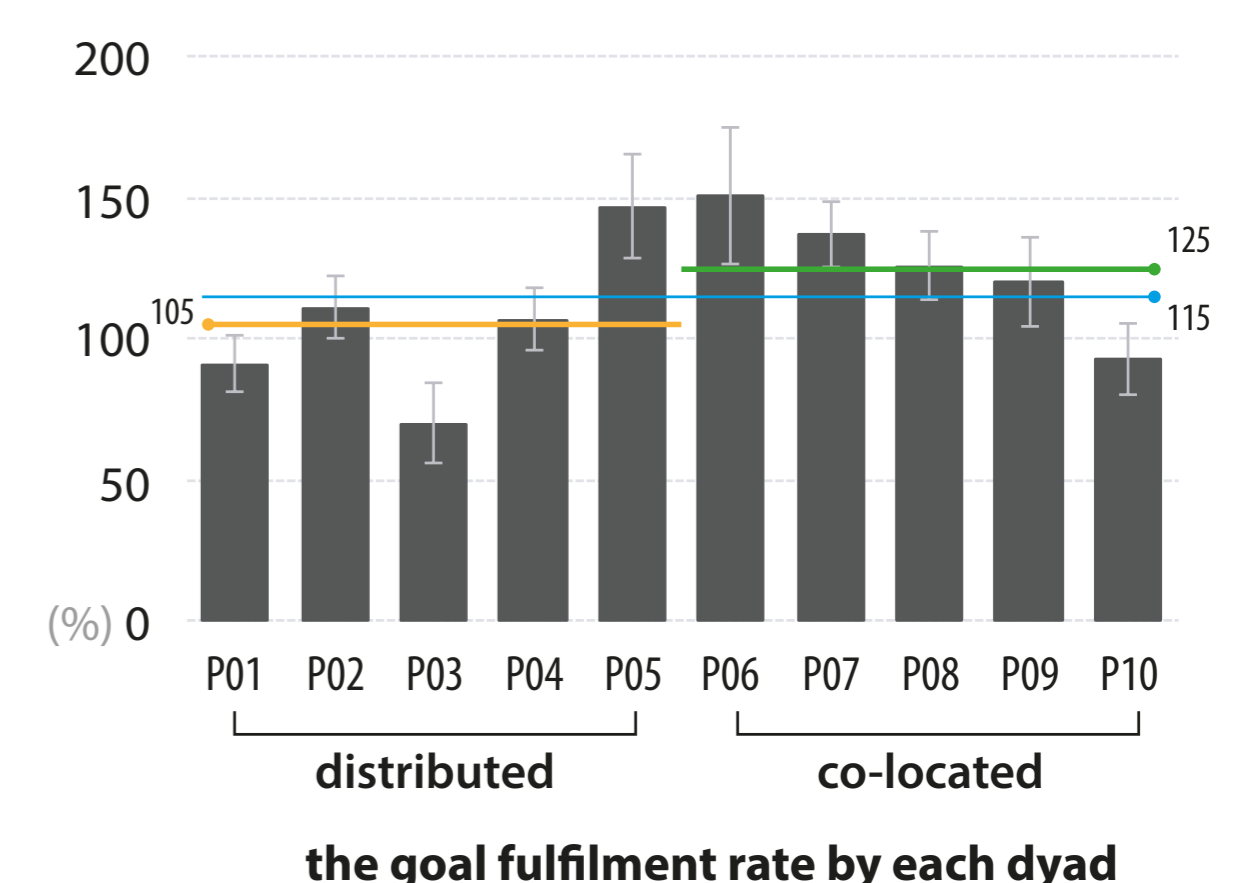
References

[1] Ren, X., Yu, B., Lu, Y., & Brombacher, A. (2018). Exploring cooperative fitness tracking to encourage physical activity among office workers. Proceedings of the ACM on Human-Computer Interaction, 2(CSCW), 146.

[2] Ren, X., Hollander, L., Marel, R. V. D., Molenaar, L., & Lu, Y. (2019). Step-by-Step: Exploring a Social Exergame to Encourage Physical Activity and Social Dynamics among Office Workers. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (p. LBW0133). ACM.



the frequency of goal compliance by each dyad



the goal fulfilment rate by each dyad

Step-by-Step facilitates physical activity tasks that can be relayed from one to another co-worker in a workplace