



Curtin University

Implementing a Group Motivational Intervention to Enhance Physical Activity Motivation in Adults Undergoing Treatment for Alcohol and Other Drugs

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Physical Activity Interventions for AOD

- Effects of physical activity (PA) in AOD populations:

↑ increased	↓ decreased
cardiovascular function, neuromotor skills & physical fitness ¹	craving & substance use ²
mood & affect ⁴	psychological distress ³
perceived quality of life & relapse prevention efficacy ⁵	depression & anxiety ⁴

- Issues with **motivation** and **long-term maintenance of PA**⁶

References:

- ¹ Hallgren, M., Vancampfort, D., Giesen, E. S., Lundin, A., & Stubbs, B. (2017). Exercise as treatment for alcohol use disorders: Systematic review and meta-analysis. *British Journal of Sports Medicine*, 51(14), 1058–1064.
- ² Piché, F., Daneau, C., Plourde, C., Girard, S., & Romain, A. J. (2023). Characteristics and impact of physical activity interventions during substance use disorder treatment excluding tobacco: A systematic review. *PLOS ONE*, 18(4), e0283861.
- ³ Saxena, S., Van Ommeren, M., Tang, K. C., & Armstrong, T. P. (2005). Mental health benefits of physical activity. *Journal of Mental Health*, 14(5), 445–451.
- ⁴ Linke, S. E., & Ussher, M. (2015). Exercise-based treatments for substance use disorders: Evidence, theory, and practicality. *The American Journal of Drug and Alcohol Abuse*, 41(1), 7–15.
- ⁵ Furzer, B., Rebar, A., Dimmock, J. A., ..., & Jackson, B. (2021). Exercise is medicine... when you enjoy it: Exercise enjoyment, relapse prevention efficacy, and health outcomes for youth within a drug and alcohol treatment service. *Psychology of Sport and Exercise*, 52, 101800.
- ⁶ Thal, S. B., Maunz, L. A., Quested, E., Bright, S. J., Myers, B., & Ntoumanis, N. (2023). Behavior change techniques in physical activity interventions for adults with substance use disorders: A systematic review. *Psychology of Addictive Behaviors*, 37(3), 416–433.



TENACIOUS HOUSE
Connection. Hope. Resilience.



Motivational Group Intervention⁷

- **Aim:** Increase (quality of) PA motivation
- Support group format = 12 x 60min sessions
- Adjunct to treatment as usual
- Motivational Interviewing + Self-Determination Theory principles
- F2F delivery followed by group exercise

References:

⁷Thal, S., Ntoumanis, N., Bright, S., Myers, B., Kwasnicka, D., Verboon10, P., & Quested, E. A Group Motivational Intervention to Support Motivation for Physical Activity among Adults in Residential Treatment for Substance Use Disorders: Protocol for a N-of-1 Study. <https://doi.org/10.31219/osf.io/jmr38>

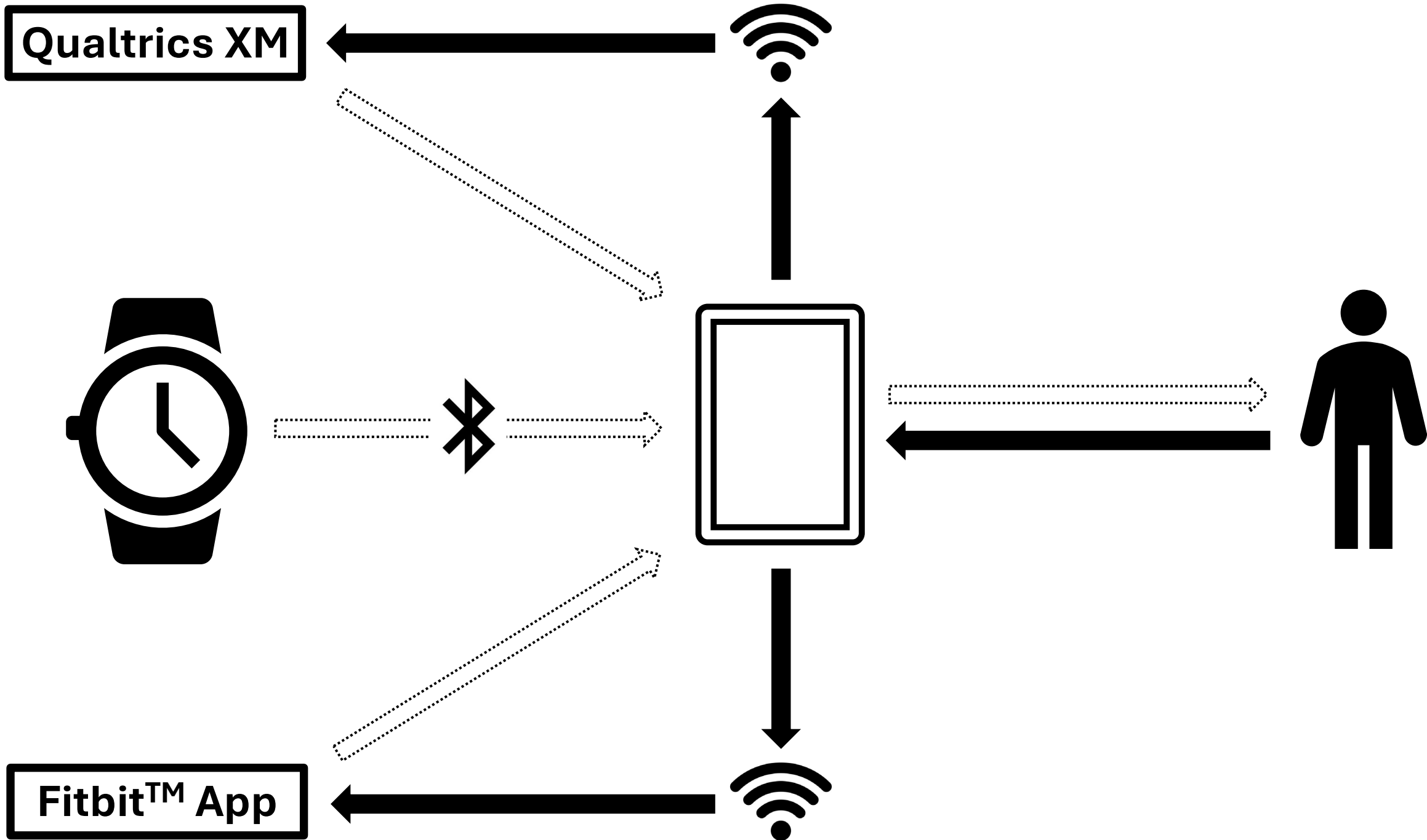


N-of-1 study design

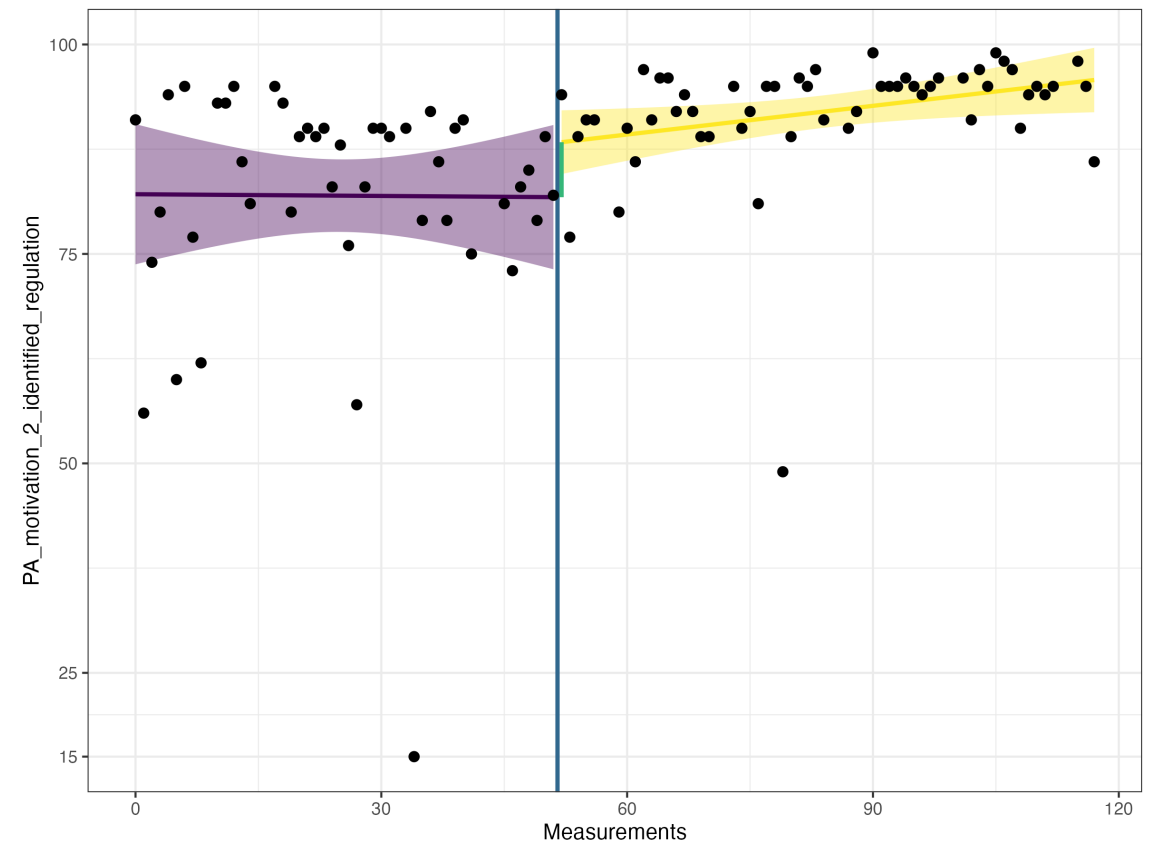
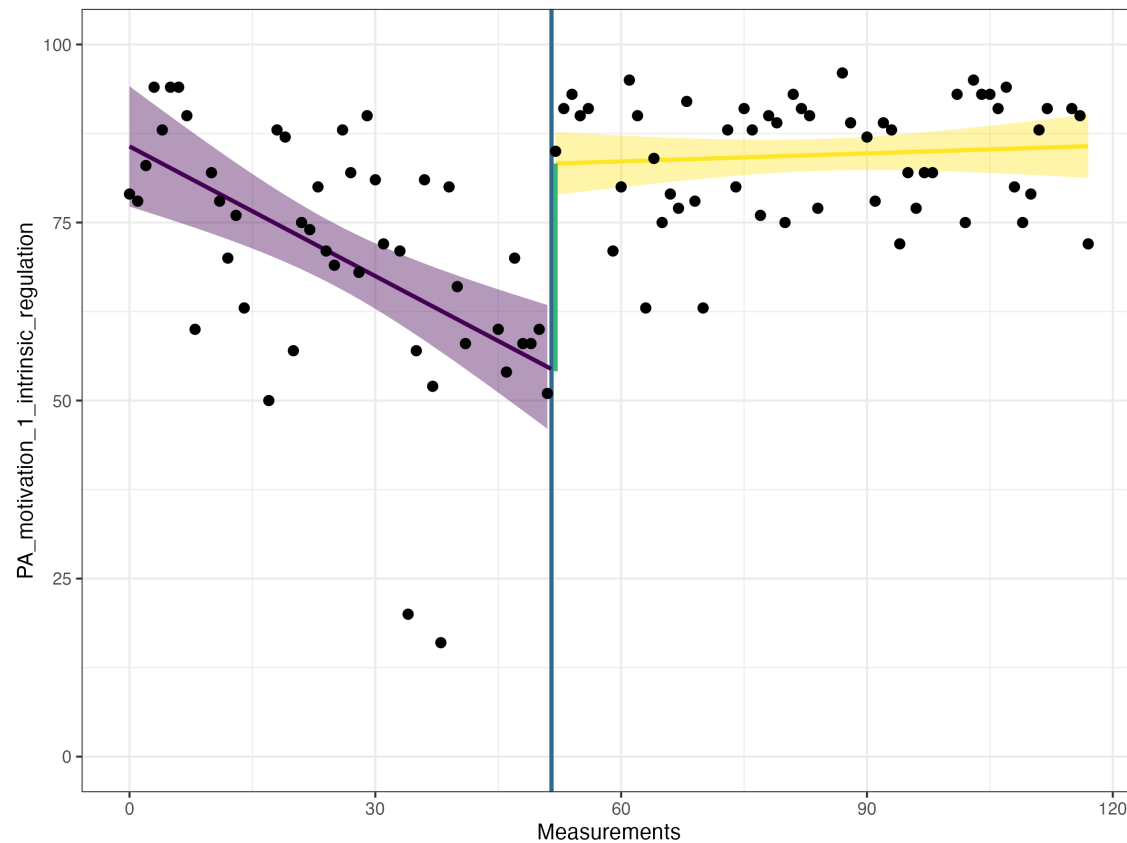
- “*N-of-1 methods involve the repeated measurement of an individuals over time.*” (McDonald et al., 2017⁸)
- 6 weeks baseline + 10 weeks intervention
- iPads: Daily EMA self-report surveys on
 - PA Motivation
 - Affect
 - Craving
- Fitbit™: Step counts, active minutes
- ACTRN12623001261606

References:

⁸ McDonald, S., Quinn, F., Vieira, R., O'Brien, N., White, M., Johnston, D. W., & Sniehotta, F. F. (2017). The state of the art and future opportunities for using longitudinal n-of-1 methods in health behaviour research: a systematic literature overview. *Health Psychology Review*, 11(4), 307-323.

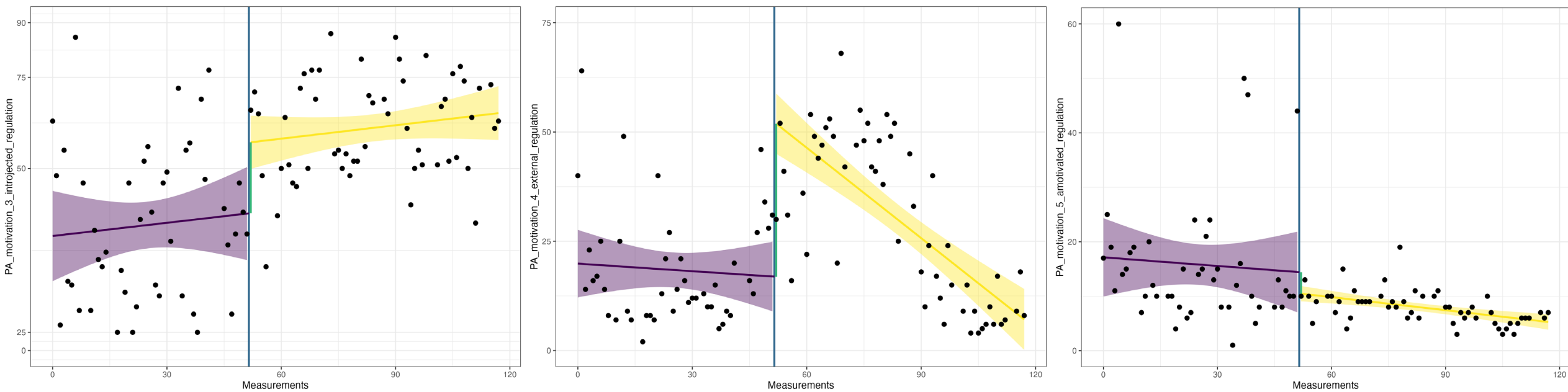


Autonomous Motivation



 = baseline data  = intervention data  = 95% CI at slope

Controlled Motivation



= baseline data = intervention data = 95% CI at slope

Findings & future directions

- Autonomous motivation ↑ and controlled motivation ↑
- N-of-1 designs can be implemented in AOD treatment settings
- High retention rates: 92% overall response rate to daily surveys, 83% intervention attendance
- Highly physically active sample (12,523 steps/day, 560 active minutes/week)
- Future research:
 - Limit controlled change talk
 - PA optional

Cheers!

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