



The Association Between Physical Activity in Childhood and Problem Management in Adulthood

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Introduction

- Physical activity is associated with positive mental and social benefits for children and adults. (Gualdi-Russo & Zaccagni 2021)
- Avoidant tendencies are linked to symptoms of anxiety and depression. (Baker, Berghoff, et. al. 2024), (Garrison, Kahn, & Mallinckrodt 2009)
- Individuals with avoidant tendencies experience decreased stability of their cognition, behavior, emotional health, and well being. (Nikitin & Freund 2008)
- Physical exercise is shown to decrease symptoms of anxiety and other stress disorders (Cosco, Rosenbaum, et. al 2017).
- It is not yet clear whether avoidant tendencies could be specifically predicted by the level of physical activity experienced in childhood.

Research Questions

- Is there a relationship between regular engagement in physical activity during childhood and problem management in adulthood?
- Does the association between physical activity vs. problem management differ for individuals based on having a history of anxiety?

Methods

Sample

- Respondents (n=4057) were drawn from the U.S. National Longitudinal Survey of Adolescent Health (ADDHEALTH) in two study waves. The sample from the Wave 1 study represents respondents in grades 7-12, and the subsequent Wave 5 study represents those same respondents in their late 30s/early 40s.

Measures

- Physical exercise in childhood was assessed through asking respondents in wave 1 how often they exercised and how often they played sports. These questions were data managed to have 4 level categorical variables ranging from not at all to 5+ times a week.
- Difficulty with managing personal problems and problem avoidance were assessed through asking respondents in wave 5 how often they felt unable to control important life decisions and how often they avoided confrontation of problems. These questions were re-coded to collapse responses within the variable to simple 0=never/rarely or 1=often, as well as 0=disagree/neutral or 1=agree (respectively).

Results

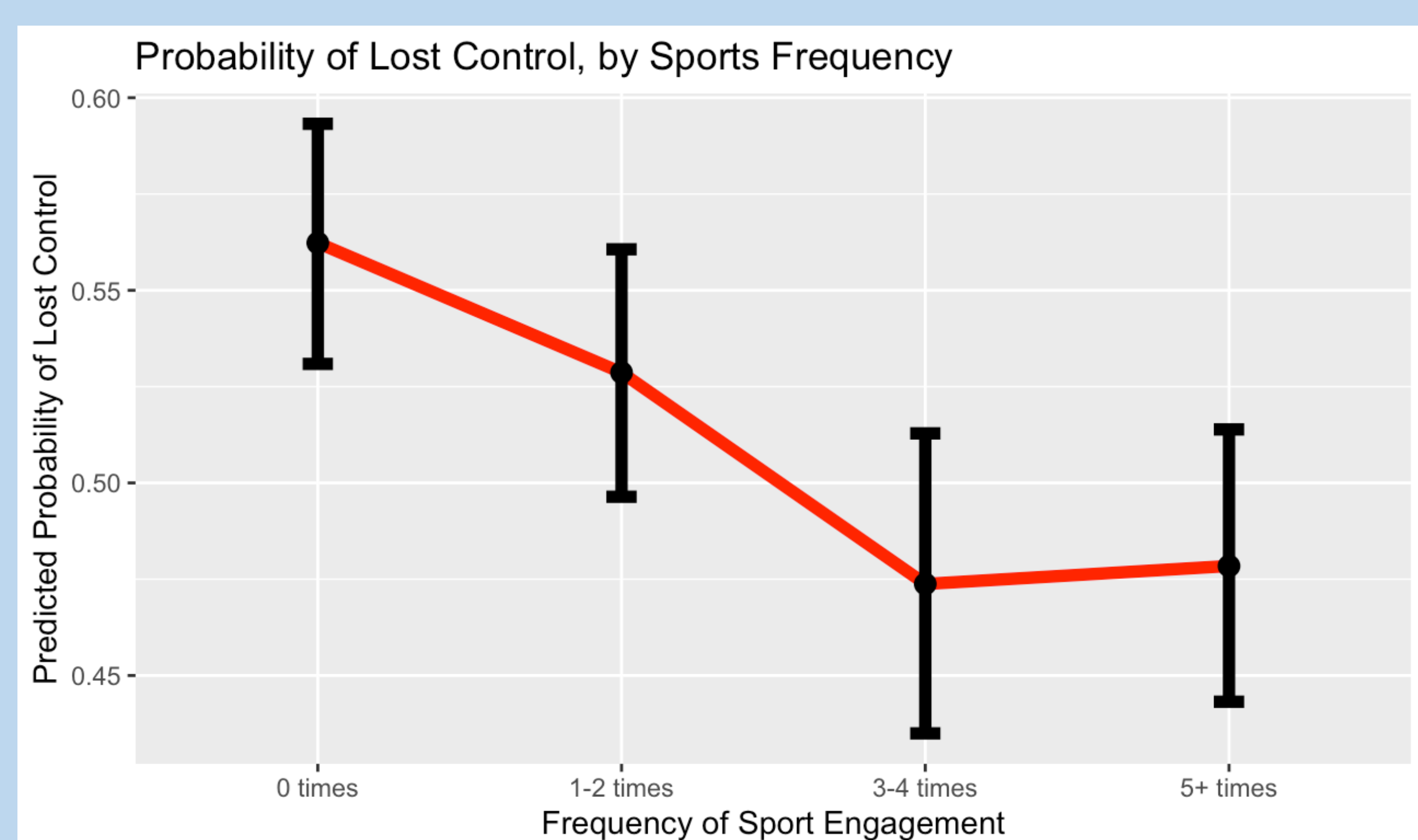
Univariate

- 70.4% of respondents played a sport at some frequency throughout the week in childhood.
- 48.7% of respondents felt usually in control of managing life problems.

Bivariate

- With higher frequencies of sport engagement in childhood, there was a lower probability of the respondents feeling like they lost control of managing life decisions in adulthood.
- OR= 0.71 for respondents who played sports 5+ times a week. In other words, it's 29% less likely that the respondents who played sports 5+ times a week felt like they lost control compared to respondents who played 0 sports a week.

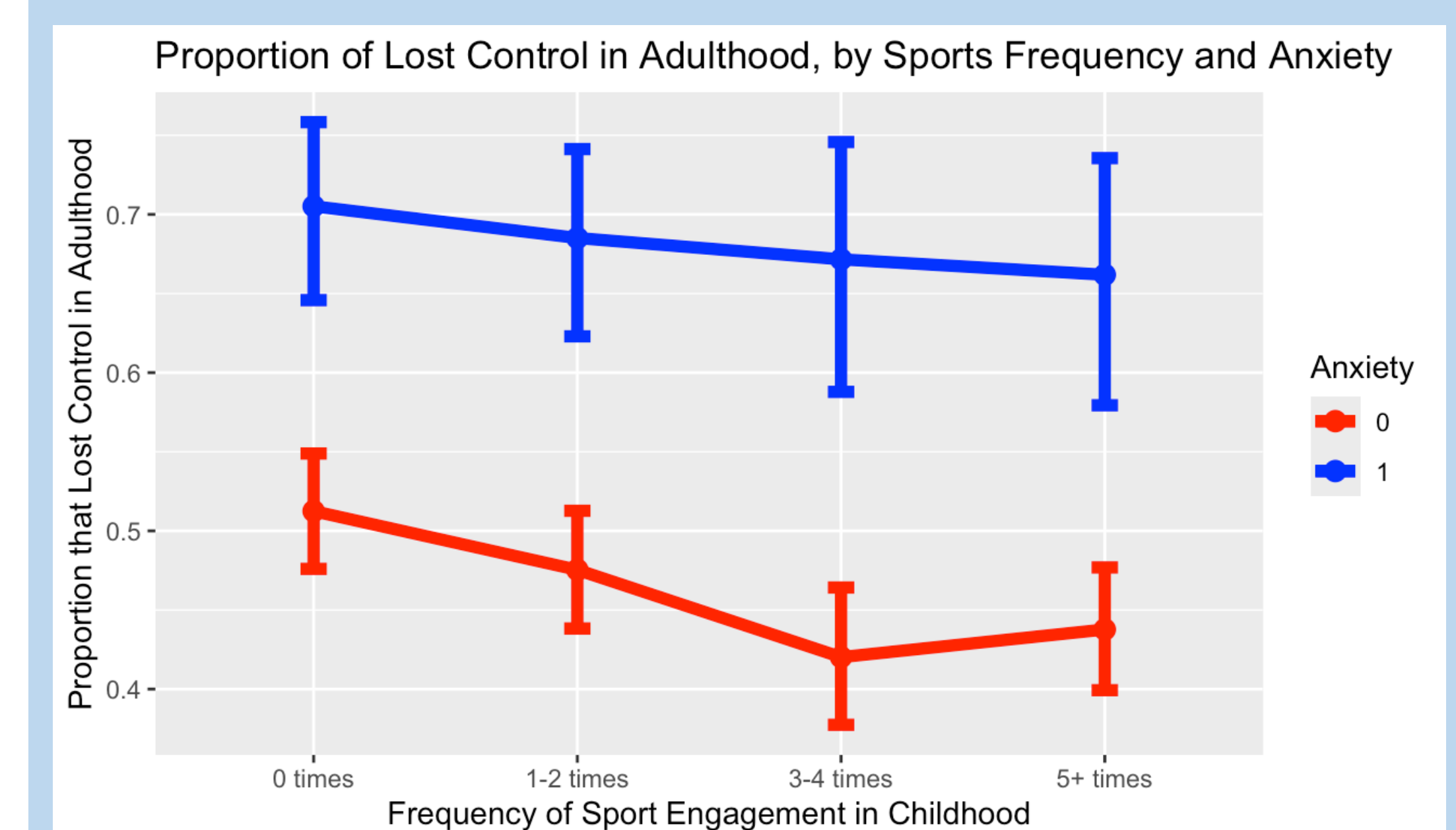
Figure 1. Probability of Lost Control, by Sports Frequency



Multivariate

- Anxiety was not found to moderate the association between sports frequency in childhood and control problem management in adulthood (Figure 2).
- Although a history of anxiety itself is significantly related with feeling in control of problems ($p < 0.05$, OR= 2.46), there is no significant impact on feelings of lost control when considering a history of anxiety and sports frequency ($p > 0.05$).

Figure 2. Proportion of Subjects that lost Control, by Sports Frequency and Anxiety History



Discussion

- A history of anxiety may not affect how childhood exercise is linked to feeling out of control with problem management in adulthood.
- Regardless of history of anxiety, there's a higher proportion of individuals who exercised/played sports more frequently in childhood that also feel more in control of their problem management in adulthood.
- This information could be used to help support why it is important for children and adolescents to engage in physical activity.

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Cosco, T., Firth, J., Rosenbaum, S., Salum, G. A., Scuch, F.B., Stubbs, B., Vancampfort, D., Veronese, N. (2017). An examination of the anxiolytic effects of exercise for people with anxiety and stress related disorders: A meta-analysis. *Psychiatry research*, 249(3), 201-108.

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