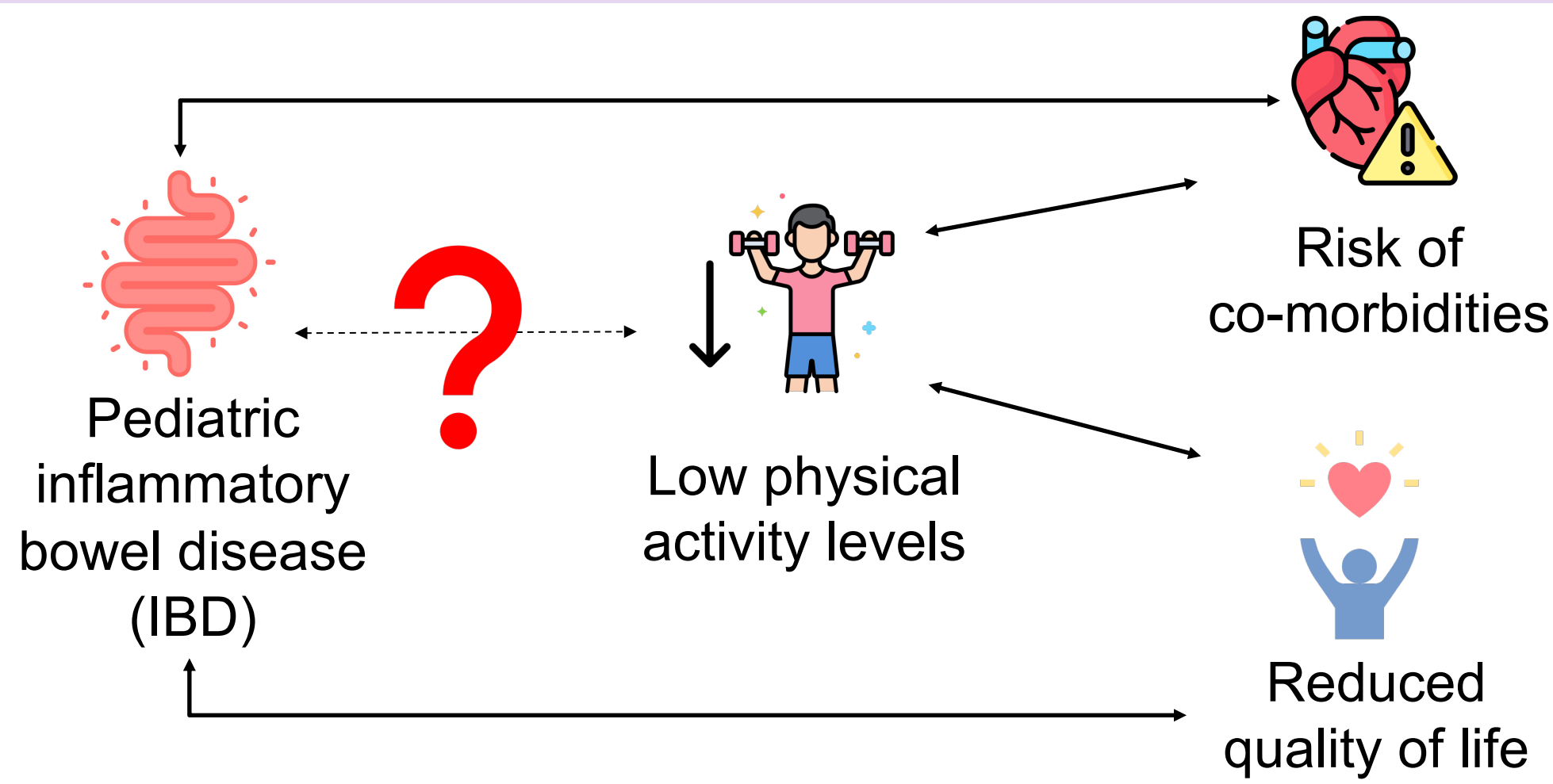


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Background



Objectives

1. Describe physical activity levels in pediatric IBD patients.
2. Assess the relationship between physical activity intensity & barriers to physical activity in pediatric IBD patients.

Methods

Inclusion criteria:

- 7- to 17-year-olds with a single, confirmed diagnosis of IBD

Barriers to Physical Activity Questionnaire:

- Total score, body-related, convenience, resource, social, fitness, & disease-related barriers
- *How often do the following things prevent you from getting physical activity?*



Physical Activity Measurement:

- ActiGraph accelerometer worn on waist for 7 days
- Calculated average daily minutes of total physical activity (TPA), light physical activity (LPA), moderate-to-vigorous physical activity (MVPA)

Results

Table 1: Participant Characteristics

| Variable | Mean ± SD | Range |
|--------------------------------|-------------|-------------|
| N (% Female) | 49 (31%) | - |
| Age (years) | 14.8 ± 2.0 | 10.4 – 17.9 |
| Height percentile | 46.1 ± 27.2 | 1.4 – 97.4 |
| Weight percentile | 40.8 ± 26.5 | 0.9 – 93.3 |
| Patient global status (max 10) | 1.11 ± 1.84 | 0.00 – 6.50 |
| Total barrier score (max 5) | 1.73 ± 0.52 | 1.09 – 3.55 |

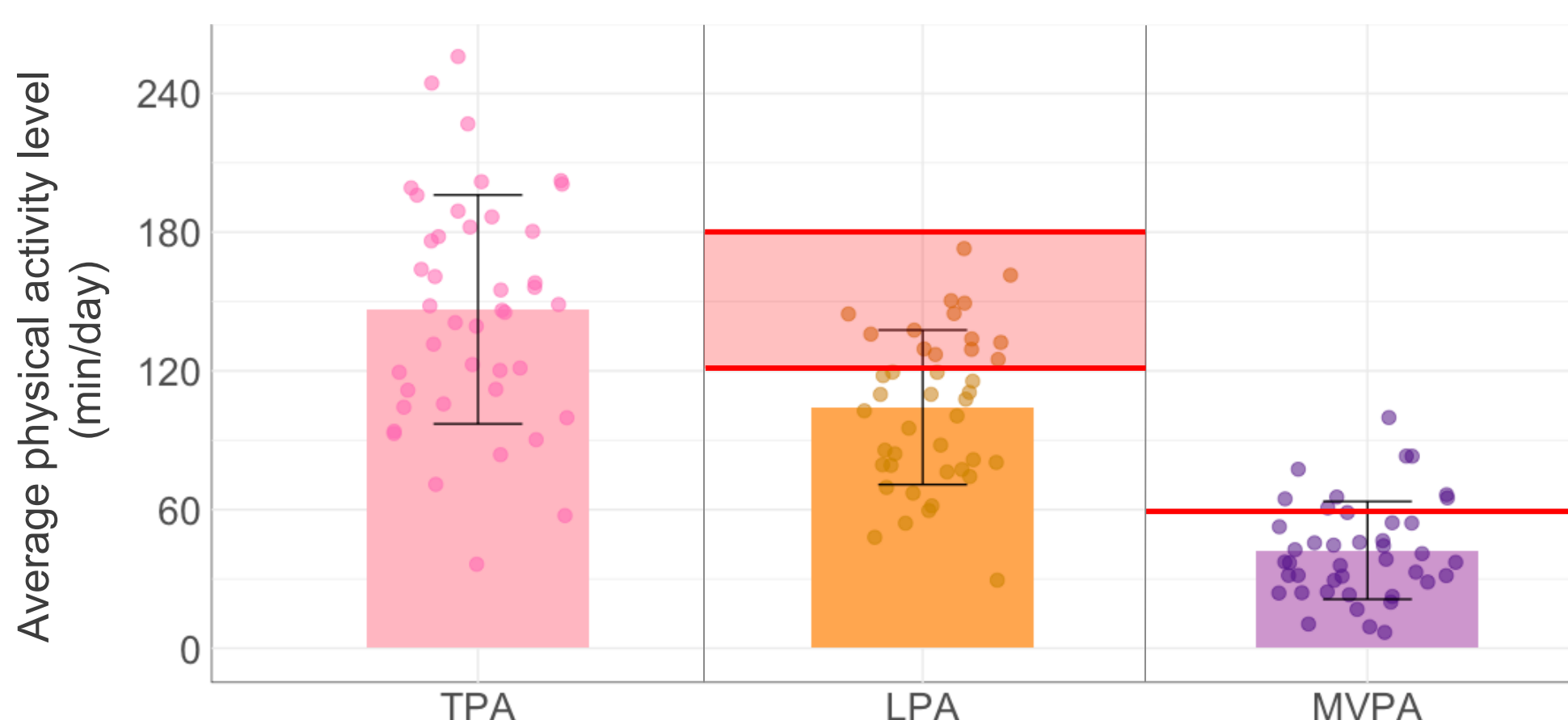


Figure 1: Low physical activity levels in pediatric IBD

The bars represent group averages, the error bars are standard error, and circles represent individual data points for physical activity. The red lines represent Canadian recommendations; 33% of participants achieved several hours/day of LPA and 21% achieved the recommended 60 min/day of MVPA.

Results

Tables 2,3,4: Barriers & age predict TPA

F (1,32) = 9.884, R² = 0.236, p = 0.004

| Model | B | Std. Error | p-value |
|-------|---------|------------|---------|
| Total | -47.763 | 15.193 | 0.004* |

F (1,32) = 19.922, R² = 0.384, p < 0.001

| Model | B | Std. Error | p-value |
|----------|---------|------------|---------|
| Resource | -48.298 | 10.821 | <0.001* |

F (2,31) = 9.775, R² = 0.387, p < 0.001

| Model | B | Std. Error | p-value |
|---------|---------|------------|---------|
| Age | -9.106 | 4.124 | 0.035* |
| Fitness | -41.483 | 16.213 | 0.016* |

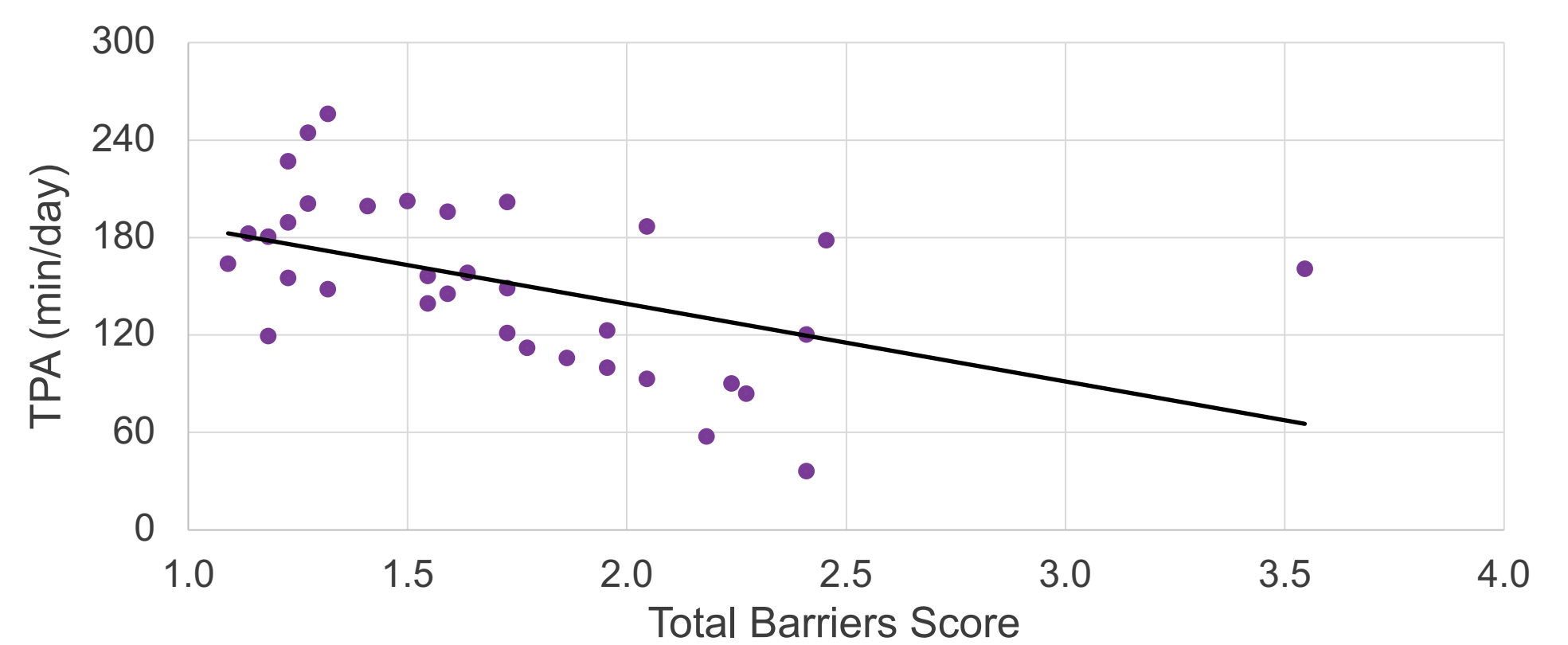


Figure 2: Negative linear relationship: TPA & total barriers

Data are presented as individual participant data points with trendline.

- Total ($\beta=-18.75$, $p=0.01$), resource ($\beta=-18.62$, $p<0.001$) & fitness barriers ($\beta=-22.01$, $p=0.008$) similarly predicted MVPA
- Total ($\beta=-29.01$, $p=0.01$) & resource ($\beta=-29.68$, $p<0.001$) predicted LPA
- Body-related, convenience, social and disease-related barriers did not significantly predict TPA, LPA, or MVPA

Conclusions

- Increased risk of further health complications
- Inform future studies:
 - Patients with active disease states
 - Complete range of physical activity levels & barrier burden
 - Interventions to target resource & fitness related barriers
- Insight for disease-specific physical activity recommendations & future programming

Acknowledgements

- McMaster Children's Hospital
- Participants & families
- Child Health & Exercise Medicine Program
- TRIANGLE Program
- Funding:
 - Heart & Stroke Foundation, Grant-in-Aid
 - NASPEM, Marco Cabrera Award



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