“Before I exercise I... feel dread:” Self-control and individual experiences with physical activity

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1 Background

- Previous research has documented associations between self-control and physical activity\(^1,2\), however, little is known about how self-control relates to exercise.
- **Self control:** The capacity to move in a direction that is different from what immediately favored by the individual or situation\(^3\).
- Unlike immediately rewarding behaviors (e.g., eating cookies), exercise may demand overcoming immediate physical and emotional discomfort in favor of delayed rewards.
- We posit that emotions experienced before and after exercise may be related to one’s capacity for self-control.
- **Research question:** How do people’s experiences with exercise vary as a function of individual differences in self-control?

2 Participants and Procedure

- **Capacity for Self-Control Scale\(^*\) (α = .91)
- **Do you exercise?**

3 Results

<table>
<thead>
<tr>
<th>Age (SD)</th>
<th>% Female</th>
<th>% Non-White</th>
<th>Self-Control (SD)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.08 (10.74)</td>
<td>52.08</td>
<td>25.00</td>
<td>4.02 (0.76)</td>
<td>240</td>
</tr>
</tbody>
</table>

*Note: Self-control was measured on a 7-point scale.

**Sentiment Analysis** (“bing” lexicon for R)

- 2,858 tokens extracted from text \(\rightarrow\) 1,124 were emotions
- The rest? Verbs (“eat”), adjectives (“minor” joy”), words that had no positive or negative sentiment to them (“determined”)

Were there differences in the frequency of positive words?

![Average Proportion of Positive Sentiment](chart)

What emotions were most frequently mentioned?

Please list five emotions you experience...

...BEFORE exercising

<table>
<thead>
<tr>
<th>Proportion of HSC with word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentiment</td>
</tr>
<tr>
<td>negative</td>
</tr>
<tr>
<td>Positive</td>
</tr>
</tbody>
</table>

...AFTER exercising

<table>
<thead>
<tr>
<th>Proportion of LSC with word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentiment</td>
</tr>
<tr>
<td>negative</td>
</tr>
<tr>
<td>Positive</td>
</tr>
</tbody>
</table>

4 Summary & Conclusions

- Overall, words used to describe “after” experiences were more positive. However, people with higher HSC tended to use more positive words to describe their experiences.

Possible Interpretations

- Individuals with HSC may perceive exercise as more fun.
- Some research suggests that those with HSC tend to perceive certain tasks as more interesting and fun than those with LSC\(^4\).
- Those with HSC may also see distal rewards as more temporally proximal, or experience fewer pre-workout “barriers” because they are better prepared for them.

Limitations & Future Directions

- Retrospective nature; future studies using ecological momentary assessment (EMA) may better inform how emotions before and after exercise predict next-day physical activity behavior and long-term adherence.
- This analysis was exploratory, findings need to be replicated in need samples with higher racial diversity.

5 References
