Effect of Brief Intense Exercise on Gaming Performance of Esports Players - A Pilot Study

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METHODS

AIMS
1) To evaluate the effect of a brief bout of exercise prior and during intermissions between games on players’ gaming performance
2) To evaluate acceptability and enjoyment of the exercise intervention

METHODS

Participants were evaluated during 9 League of Legends matches

Exercise consisted of 3 minutes prior to the beginning of the first game and during the intermissions between games

RESULTS

Physical Activity Enjoyment Scale (PACES) Total Score (out of 80)

Participant Testimonial (partial list)

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Good experience overall”</td>
<td>“Too much energy”</td>
</tr>
<tr>
<td>“Good team building”</td>
<td>“Sweating is uncomfortable”</td>
</tr>
<tr>
<td>“Better in terms of mood and performance”</td>
<td>“Exercise messes with my head”</td>
</tr>
<tr>
<td>“Improved my performance overall”</td>
<td>“When I exercise I lose my zone”</td>
</tr>
<tr>
<td>“I feel more awake”</td>
<td>“Found the exercise exhausting”</td>
</tr>
<tr>
<td>“Better mood”</td>
<td>“Prefer if exercise was less intense”</td>
</tr>
</tbody>
</table>

SUMMARY

- Exercise in the esports arena prior to and during the intermissions between games is feasible
- Overall, 3 participants thought the exercise benefitted their performance while 2 participants found it uncomfortable
- Exercise intensity should be considered to be reduced or be prescribed for each participant based on his/her level of fitness and preference
- Gaming performance analysis is currently under way
- Exercise might prove to be a useful approach for some gamers to improve resilience and focus during the long hours of eSports matches

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INTRODUCTION

- Esports (electronic sports) is a form of team competition using video games
- Aerobic exercise has been shown to improve executive function tasks and increase in prefrontal cortex activity
- Presently, there are no studies that investigate the effect of exercise on gaming performance

PARTICIPANTS CHARACTERISTICS

<table>
<thead>
<tr>
<th>Number of participants</th>
<th>Age (years)</th>
<th>BMI</th>
<th>Peak VO_2 (ml/kg/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>22.7 ± 1.4</td>
<td>20.7 ± 1</td>
<td>42.2 ± 3.9</td>
</tr>
</tbody>
</table>

Heart rate during an exercise bout ranged from 68-86% of predicted maximum heart rate (reflects high intensity exercise bouts)