The Effectiveness of the FIFA 11+ at Improving Sport Performance Metrics: A Systematic Review

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Numerous systematic reviews have established that the FIFA 11+ is a proven injury prevention football (soccer) warm-up program; however, its potential for improving sport performance metrics (PM) has not been thoroughly examined.

Understanding the program’s influence on PM may provide:
1) Insight into its’ underlying injury prevention mechanisms
2) Evidence for physiotherapists to promote program ‘buy in’ and adherence to coaches and athletes.

**Objective:** To conduct a systematic review examining short- and long-term effects of the FIFA11+ on sport PM (strength, speed, agility, jump height, balance, and kicking skill/accuracy.)
Methods

- 5 databases [Medline, EMBASE, CINAHL, SPORTDiscus & Google Scholar] were searched for articles published from January 1, 2008 to September 1, 2018 using subject headings & keywords with guidance from a librarian.

- Eligible studies included:
  - Adolescent/adult competitive football (soccer) players
  - Same-group pre/post-test data on PM [speed, agility, strength, power, vertical jump height, balance, motor control and kicking skill and accuracy] after completing FIFA11+ in its entirety
  - Were in English

- Two reviewers extracted relevant data & evaluated study quality (Modified Down’s & Black checklist.)

- Due to study heterogeneity, a best-evidence synthesis was conducted for each PM.
# Results Summary (n=21)*

<table>
<thead>
<tr>
<th>Performance Metric</th>
<th>Outcome Measures</th>
<th>Short term Effects (i.e. after 1 FIFA 11+ session)</th>
<th>Long Term Effects (i.e. after 6 weeks of FIFA 11+)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td># of studies</td>
<td># finding sig. improvement</td>
</tr>
<tr>
<td>Strength*</td>
<td>ST: isometric, reactive strength index; LT: Isokinetic hamstring &amp; quadriceps strength, isometric, Eccentric hamstring, H:Q ratio, DCR</td>
<td>n=2</td>
<td>n=0</td>
</tr>
<tr>
<td>Agility</td>
<td>Illinois agility test, 5 dot &amp; 505 agility test, agility T-test</td>
<td>n=2</td>
<td>n=1</td>
</tr>
<tr>
<td>Jump height</td>
<td>Drop vertical jump, squat jump countermovement jump</td>
<td>n=2</td>
<td>n=1</td>
</tr>
<tr>
<td>Speed</td>
<td>10 &amp; 20m sprint, 10m sprint with ball</td>
<td>n=1</td>
<td>n=1</td>
</tr>
<tr>
<td>Kicking skill/accuracy</td>
<td>Wall-volley test, Target accuracy test</td>
<td>n=0</td>
<td>n=0</td>
</tr>
</tbody>
</table>

* Studies often measured multiple strength PM. When >1 was sig. improved this study was classified as a positive result despite potentially other non-sig findings.

ST: short term; LT: long term; H:Q: hamstring to quadriceps; DCR: dynamic control ratio

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*Note: Study details available upon request
Conclusions

**Synthesis found the strongest evidence that long-term FIFA11+ exposure resulted in improvements to hamstring strength-related measures, as well as some evidence of improvement in agility, jump height, & dynamic balance.**

- Overall PM improvements were most consistently seen in male professional athletes.

- Limitations of the current review include: many articles lack a placebo group and have small sample sizes limiting generalizability.

- Given the heterogeneous nature of studies, further research is warranted to understand the program’s effects on PM in different populations (*i.e.* women), with consideration of program dosage (*i.e.* adequate stimulus), and athlete’s baseline skill (*i.e.* competitive versus professional athletes).