Prior Injury, Health-Related Quality of Life, Disablement, and Physical Activity in Former Division I Women’s Soccer Players

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Definitions

• HRQoL = health related quality of life
  ➔ multi-dimensional personal measure of health

• Disablement
  ➔ Inability to perform activities that are important to an individual (due to physical or mental issue)

Health of Former College Athletes

• Former collegiate athletes have shown a decline in health outcomes:
  • Lower HRQoL
    (Simon & Docherty, 2013; 2016; 2017; 2020)
  • Challenges in maintaining PA levels across lifespan
    (Reifsteck et al., 2013; Sorenson et al., 2015)

• Prior sport related injury is a likely contributing factor to these declines
  (Cowee & Simon, 2017; Russell et al., 2017)

Why Women’s Soccer?

• Women’s soccer has high participation & injury rates
  (Kerr et al., 2015; Lopez-Valenciano et al., 2021, NCAA, 2017; US Youth Soccer, n.d.).

• Previous soccer specific research has been on male athletes

• Prien (2017) identified knee, ankle & head injuries as areas of concern for female soccer athletes
**Purpose**

To examine the role prior sports injury played in the health-related quality of life, disablement and PA of former Division I women’s soccer players.

**Methods/Data Collection**

- Cross-sectional design
- Web-based survey
  - Email
  - Social media
- Convenience & snowball sample

**Survey**

- Demographics
- Soccer playing history
- Injury history
- Health Outcomes
  - HRQoL (PROMIS)
  - Disablement (DPA)
  - PA (Godin)
- Current Health Concerns
- Exploratory Questions

**Characteristics of Participants**

- **Sample:** 
  - $n = 382$
- NCAA years played: $M = 3.86$
- $M_{age} = 36.41$, Range: 22-59
- 78% were 10+ years removed from NCAA

- **Severe Injury:** 
  - $n = 261 (68.3\%)$
- **No Severe Injury:** 
  - $n = 121 (31.7\%)$
Frequency of Injury by Location

- Knee: 42.9% (n=164)
- Ankle: 23.0% (n=88)
- Soft Tissue: 15.9% (n=61)
- Lower Leg: 12.3% (n=47)
- Head/Concussion: 11.7% (n=45)

Comparison of Health Outcomes by Injury History

<table>
<thead>
<tr>
<th></th>
<th>No Severe Injury</th>
<th>Severe Injury</th>
<th>p</th>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>HRQoL-Physical</td>
<td>54.82</td>
<td>6.37</td>
<td>52.91</td>
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<tr>
<td>HRQoL-Mental</td>
<td>54.70</td>
<td>7.89</td>
<td>54.17</td>
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<tr>
<td>DPA-Physical</td>
<td>8.86</td>
<td>10.69</td>
<td>13.77</td>
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<tr>
<td>DPA-Mental</td>
<td>2.94</td>
<td>3.26</td>
<td>2.95</td>
</tr>
<tr>
<td>PA</td>
<td>40.49</td>
<td>23.54</td>
<td>38.08</td>
</tr>
</tbody>
</table>

* Significant p < .01 (two-tailed)

Correlations Among Health Outcomes

- Higher PA → Higher HRQoL
  \[ r = .310^* \text{physical}; \ r = .199^* \text{mental} \]

- Higher disablement → Lower PA
  \[ r = -.152^* \text{physical}; \ r = -.148^* \text{mental} \]

- Higher disablement → Lower HRQoL
  \[ r = -.623^* \text{physical}; \ r = -.468^* \text{mental} \]

* Significant p < .01 (two-tailed)

Exploratory Questions

- Current health concerns?
  - At least one area of concern – 60.5%
  - Joint health – 39.0%
  - Mental health – 18.1%

- Injury impact on ability to participate in PA/sport?
  - Almost Always or Often - 28.4% of injured group

- How has soccer playing experience negatively impacted your PA & health?
  - Physical impairments – 39.8%
  - Limited in PA or Forced to Make Adjustments to PA – 24.7%
  - Negative Mental Health Impact – 9.3%
  - Fear of Health Issues in Future/Fear of Injury/Pain – 8.6%
Study Takeaways

• High rates of injury, specifically to knees & ankles of women’s soccer players

• Sports injuries can have long-term consequences

• Injury can be additional challenge to transition out of athletics & maintaining PA across lifespan

Where do we go from here?

• Emphasis should be placed on injury prevention

• Injuries will occur
  • Emphasis on rehabilitation programs
  • RTP protocols (appropriateness)

• Continued research needed

Thank you!

Questions?

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