The Role of Mentality in the Performance and Goal Achievement of High School Spring Track Athletes

MATTHEW NEUENDORF
Mental Training

- Athletes can improve physically by training mentally

- To continue improving, both physical and mental training should be addressed
  
  (Patrick and Hrycaiko, 1998)

- Especially important once high levels of success have been reached

  (Loughran et al., 2013)
Mental Characteristics

- State of Mind
  - whatisfinancialfreedom.com
- Full Body Recovery
  - coreconcepts.com.sg
- Commitment to Running
  - uanews.org
- Group Efficacy
  - 82binsight.com
- Mental Toughness
  - breakingmuscle.com
Previous Connections

- Group Efficacy
- Mental Toughness
- Commitment to Running
- State of Mind
- Full Body Recovery
- Self Determination
- Confidence
- Control
- Aggression
- Overtraining

Increased Performance
Decreased Performance
Positive Connections

1. Group Efficacy
2. Mental Toughness
3. Commitment to Running
4. State of Mind
5. Self Determination
6. Control
7. Aggression

Increased Performance

References:
1. Blanchard et al., 2009
2. Kaiseler et al., 2009
3. Sheard et al., 2009
4. Donahue, et al., 2009
5. Vallerand, et al., 2008
6. Horowitz, 1988
Negative Connections

Mental Toughness$_1$

Commitment to Running

Full Body Recovery

Confidence$_1$

Aggression$_2$

Overtraining$_3$

Decreased Performance

1. (Woodman, 2010)
2. (Vallerand et al., 2008)
3. (Veal, 1991)
Research Question

What correlations, if any, can be drawn between mental characteristics and goal achievement in high school spring track athletes?
Participants

- Age 13-18 years old
- 102 total participants
  - 55 male
  - 47 female
- Average experience: 3.37 years
  - SD: 2.12 years
- Must actively compete in a running event

e.standards.net
Surveying: Beginning of Season

- **Personal Statistics and Goals**
  - **Baseline Survey**
    - **GEQ** (Carron et al., 1985)
    - **MT** (Sheard et al., 2009)
    - **CR** (Zarauz Sancho, 2011)

- **Goals**
  - **Personal Goals**: Please list any personal goals you have for this season.
  - **Mid-season goals**: What would you like to accomplish in one month?
    - **Mid-season goal #1**: __________
    - **Previous personal record for this event (if applicable)**: __________
    - **How confident are you that you can achieve this goal in one month?**
      - 1 = (Not confident)
      - 2 = (Not very confident)
      - 3 = (Somewhat confident)
      - 4 = (Confident)
      - 5 = (Very confident)
    - **How important is this goal to you?**
      - 1 = (Not important)
      - 2 = (Not very important)
      - 3 = (Somewhat important)
      - 4 = (Important)
      - 5 = (Very important)

- **Questions**
  - 3. I am not going to miss the members of this team when the season ends.
  - 22. I have what it takes to perform well while under pressure.
  - 40. I would reorganize or change my timetable in order to satisfy my need to run.
Surveying: Semi - Weekly

Positive State of Mind Scale
(Horowitz, 1988)

Feeling of being able to stay at work until a task or responsibility is finished; do something new to solve problems; or express your creativity.

Unable to | Trouble in | Limited in | Able to

Recovery-Stress Cue
(Kellmann & Kallus, 2001)

How well did I recover physically last week?

Not well | 1 2 3 4 5 | Very Well
Surveying: Mid-Season

- Mid-Season Goal Achievement Survey
Surveying: End of Season

- End of Season Goal Achievement
- Reassessment of Baseline Tests
  - GEQ
  - MT
  - CR
Goal Achievement Analysis

- Quantitative answers:
  (beginning mark – end mark)
  (beginning mark – goal mark)

- Qualitative answers:
  Achieved – (1)
  Close – (0.5)
  Did not achieve – (0)
Group Efficacy: Strong relationship between performance and end of season scores

<table>
<thead>
<tr>
<th>Group</th>
<th>$M_{MIN}$</th>
<th>$M_{IMP}$</th>
<th>$M_{EXC}$</th>
<th>$T$</th>
<th>Df</th>
<th>p</th>
<th>cohen's d</th>
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**KEY**
- PG – Personal Goals
- TG – Team Goals
- B – Beginning of Season
- E – End of Season

**Cohen’s d Standards**
- 0.2 – Small effect
- 0.5 – Medium effect
- 0.8 – Large effect
Mental Toughness: Correlations between both beginning and end of season scores

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Commitment to Running: Significant effect between all scores and team goals

<table>
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Positive State of Mind: Highest scores at both extremes of goal achievement

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Positive State of Mind Week 7

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ROL METHODS RESULTS BIBLIO
Mental Recovery: Direct relationship between scores and performance

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The Importance of Personal Goal Setting (PGS)

<table>
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<th>Group</th>
<th>Stay in shape for other sports</th>
<th>I like to be part of the competitive track team</th>
<th>Improve physical ability</th>
<th>Be part of a group activity</th>
<th>Someone else wanted me to</th>
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<td>0.8500</td>
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Conclusions: An athletic timeline for success

- 4 out of the 5 studied variables were noticeably significant

- Athletes who develop a high GEQ mentality by the end of the season will achieve goals

- Athletes who have and maintain high levels of CR and MR are prone to achieve goals

- High PSM scores are important to, but do not necessarily result in goal achievement
Future Research

Implementation
Bibliography


