“I’d got self-destruction down to a fine art”: Exploring the lived experience of low energy availability in athletes and exercisers

Rachel K. Langbein, Patricia C. Jackman, Daniel Martin, and Lee Crust
School of Sport and Exercise Science, University of Lincoln, Lincoln, UK

1. Background

- Low energy availability (LEA) occurs when energy intake is insufficient to support optimal physiological functioning after exercise energy expenditure has been considered (Loucks, 2007).
- LEA was identified as the antecedent of the Female Athlete Triad syndrome, which is a spectrum of health and disease with clinical manifestations of eating disorders, amenorrhea, and osteoporosis (Nattiv et al, 2007).
- The consequences of LEA have been more recently captured by the broader Relative Energy Deficiency in Sport (RED-S) model (Mountjoy et al., 2014).
- To date, the majority of research has focused on physiological factors and employed quantitative methods, with little research concerning the lived experience of LEA.

2. Aim and Method

- Aim: To qualitatively explore the lived experience of LEA in sport and exercise participants.
- Thirteen sport and exercise participants (female $n=11$, male $n=2$; $M$ age = 31.15 years) with previous or current experience of LEA participated.
- Participants took part in semi-structured interviews (face to face $n=9$; Skype $n=4$) concerning their experiences of LEA ($M$ length = 53 minutes).
- Interviews were transcribed verbatim and analysed in accordance with principles for the phenomenological psychological method.

3. Results

<table>
<thead>
<tr>
<th>Onset</th>
<th>Presentation</th>
<th>‘Recovery’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Psychological and situational stressors</strong></td>
<td><strong>Disordered eating/eating disorders</strong>&lt;br&gt;• Distorted body image&lt;br&gt;• DE behaviour/clinical ED diagnosis&lt;br&gt;• Perceived need for control&lt;br&gt;• Stressful life events</td>
<td><strong>Navigating the tightrope to recovery</strong>&lt;br&gt;• Influence of significant others&lt;br&gt;• Social comparison</td>
</tr>
<tr>
<td><strong>Increased exercise</strong></td>
<td><strong>A body thrown into disarray</strong>&lt;br&gt;• Menstrual dysfunction&lt;br&gt;• Bony stress injuries&lt;br&gt;• Fatigue and weakness&lt;br&gt;• Decreased immunity&lt;br&gt;• Gastrointestinal impairments&lt;br&gt;• Thermoregulatory concerns&lt;br&gt;• Hormonal imbalance</td>
<td><strong>A continuous tug of war</strong>&lt;br&gt;• Situational pressures&lt;br&gt;• Denial/downplaying of perceived consequences&lt;br&gt;• Psychological conflict</td>
</tr>
<tr>
<td><strong>Energy expenditure</strong></td>
<td><strong>Exercise as a compulsion</strong>&lt;br&gt;• Obsessive exercise&lt;br&gt;• A vehicle for further energy expenditure</td>
<td><strong>“I have to fight on a daily basis still... with exercise and how much I should be doing... how much is acceptable, how much is too much... giving myself the day off. Fuelling adequately, trying with this constant battle going on in my head”</strong></td>
</tr>
<tr>
<td><strong>External pressures</strong></td>
<td><strong>Personality characteristics</strong>&lt;br&gt;• High achieving nature&lt;br&gt;• Perfectionist tendencies&lt;br&gt;• Poor self-worth</td>
<td></td>
</tr>
<tr>
<td>• External appraisals of physique&lt;br&gt;• Coach beliefs and comments&lt;br&gt;• Sport-specific pressures</td>
<td><strong>Professional education and support</strong>&lt;br&gt;• Negative experiences of professional education/support&lt;br&gt;• Positive experiences of Dietetic support</td>
<td></td>
</tr>
</tbody>
</table>

4. Conclusions

- Findings substantiate the existing evidence base with regard to: LEA development; pertinent characteristics of the LEA experience; and factors that facilitate or hinder recovery progress, thus providing novel insights from the perspective of information-rich cases.
- This study sheds light on the importance of education and awareness of LEA in future prevention and management of the condition and the value of a robust, multi-faceted support network to facilitate resumption of optimal EA and recovery from its individual associated effects.

5. References