CORRELATION OF MOTOR ABILITIES AND BODY CHARACTERISTICS OF YOUNG FEMALE CATEGORIES WITH PERFORMANCE IN INDIVIDUAL DISCIPLINES IN ALPINE SKIING

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alpine skiing, category U16 (age 15 & 16); 28 female racers
competition VN Nordica Dobermann: slalom, giant slalom, super-giant slalom
measurements at the Faculty of sports - battery of tests; 9 motor abilities, 4 body characteristics
"Dry" training and training on snow
exercise planning and implementation
sensitive period of development
PROBLEM

- how / to what extent do motor abilities affect competitive performance?
- how / to what extent do body characteristics affect competitive performance?
- how / to what extent does the whole model of motor abilities and body characteristics affect competitive performance?
METHODS

• 28 competitors - girls
• 19 ski clubs, all 4 Slovenian regions
• ski season 2018/19
• RACES: 3 slalom, 3 giant slalom, 2 super-giant slalom
• correlation analysis with individual disciplines
• linear regression analysis
## RESULTS

### Correlations

<table>
<thead>
<tr>
<th>Test</th>
<th>slalom</th>
<th>giant slalom</th>
<th>super-giant slalom</th>
</tr>
</thead>
<tbody>
<tr>
<td>ten-jump test</td>
<td>r = 0.49</td>
<td>r = 0.60</td>
<td>r = 0.56</td>
</tr>
<tr>
<td>running 400 m</td>
<td>r = -0.49</td>
<td>r = -0.55</td>
<td>r = -0.62</td>
</tr>
<tr>
<td>agility</td>
<td>r = -0.37</td>
<td>-</td>
<td>r = -0.43</td>
</tr>
<tr>
<td>max running speed</td>
<td>-</td>
<td>r = 0.37</td>
<td>-</td>
</tr>
<tr>
<td>pull-ups</td>
<td>r = 0.38</td>
<td>r = 0.43</td>
<td>r = 0.39</td>
</tr>
<tr>
<td>stabilization</td>
<td>-</td>
<td>r = 0.37</td>
<td>-</td>
</tr>
<tr>
<td>body height</td>
<td>r = 0.53</td>
<td>r = 0.46</td>
<td>r = 0.46</td>
</tr>
</tbody>
</table>

### Linear regression analysis

<table>
<thead>
<tr>
<th>Test</th>
<th>slalom</th>
<th>giant slalom</th>
<th>super-giant slalom</th>
</tr>
</thead>
<tbody>
<tr>
<td>body characteristics</td>
<td>R² = 0.25</td>
<td>-</td>
<td>R² = 0.23</td>
</tr>
</tbody>
</table>
CONCLUSION

- rejection of most hypotheses; small sample
- differences in development are greatest during this period
- test battery update; introduction of general and special tests
- "Hidden" performance factors
- ski knowledge tests
- systematic training planning
THANK YOU FOR YOUR ATTENTION!