INTRODUCTION

- The Navicular Drop Test (NDT) is used as a clinical measure of mid-foot pronation.
- Objective measurements are rooted in the trust of the tool. When utilizing the NDT, the tool is the practicing clinician.
- Research has revealed that experienced clinicians have good-excellent intra- and inter-rater reliability when measuring navicular drop (ND).¹
- Current data reports ~25,000 practicing US PTs have < 3 years experience.¹
- There is limited research exploring the intra- and inter-rater reliability of less experienced DPTs when performing the NDT.

PURPOSE

- To determine the intra- and inter-rater reliability of three 2nd year DPT students.

METHODS

- Three 2nd year DPT students (testers) performed two sets of three trials assessing left and right navicular drop (L/RND) on a random sample of female basketball athletes (age 16±1.1).
- Foot templates were utilized to minimize each subject’s foot placement variability.³
- ND was measured from subtalar joint neutral to single limb standing relaxed position utilizing a modified Brody protocol.³
- Testers designated as Brown, Green, and Blue were blinded to all results.
- The instrumentation used to collect data in standard millimeter measurements was the Tacklife DC01 Digital Caliper® (Shenzhen, Guangdong, China). ICC statistical analysis was performed utilizing SPSS 21 software®.

RESULTS

<table>
<thead>
<tr>
<th>2-way Inter-rater Reliability</th>
<th>Right Navicular Drop ICC (p)</th>
<th>Left Navicular Drop ICC (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown vs Blue</td>
<td>0.91  (p=0.60)</td>
<td>0.60  (p=0.23)</td>
</tr>
<tr>
<td>Green vs Brown</td>
<td>0.94  (p=0.01)</td>
<td>0.63  (p=0.09)</td>
</tr>
<tr>
<td>Blue vs Green</td>
<td>0.95  (p=0.01)</td>
<td>0.98  (p=0.01)</td>
</tr>
</tbody>
</table>

DISCUSSION

- Good-excellent intra- and inter-rater reliability was determined for 2nd year DPT student testers.
- Outcomes were consistent with experienced clinicians, despite a low sample size.
- The variance in data could be due to inconsistent subject performance.

CONCLUSIONS

- Our findings suggest 2nd year DPT students are prepared to administer the NDT.
- Future research may consider investigating the role of subject leg dominance when assessing reliability.

ACKNOWLEDGEMENTS

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REFERENCES

1. Physical Therapy Workforce Data. APTA. http://www.apta.org/Practice/Workforce/Research/WorkforceData