A SPORTS SPECIFIC PLANK PROGRESSION TEST TO MEASURE CORE ENDURANCE: A RELIABILITY AND PILOT STUDY

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BACKGROUND AND PURPOSE: Low back pain (LBP) is a common musculoskeletal complaint within the general and athletic population. Research has found that poor core endurance is a contributor to LBP. Clinical settings lack a sport specific and practical measure of core endurance for an athletic patient population. The purpose of this study was to establish the reliability of the Sports Specific Endurance Plank Test (SSEPT) and to analyze differences in test scores among female athletes and healthy non-athlete females. Our hypothesis was the test would be reliable and the athlete group would have higher scores than the non-athlete group.

SUBJECTS: Reliability: 12 second-year students from the SCU DPT class of 2019.

Pilot: 6 undergraduate female SCU soccer players and 8 female SCU second-year DPT students.

METHODS AND MATERIALS: Reliability: Students were instructed on SSEPT content and scoring, observed a demonstration video, and scored it. Pilot: Athletes performed two trials of SSEPT--continuous prone plank with systematic points of contact removed, scored based on phases completed.

ANALYSES: Reliability: Reliability of student subjects and 2 student researchers were established based on percent agreement with an expert rater. Pilot: A one-way ANOVA was used to compare scores between groups. Reason for cessation of test was analyzed based on percentage.

RESULTS: Reliability: Overall agreement with the expert rater was found to be 96% (75%-100% range).

Pilot: No significant difference found between group scores ($p=0.409$). 73% of subjects reported some aspect of core weakness or fatigue as a reason for stopping the test.

CONCLUSIONS: Results indicate good reliability for SSEPT scoring. There was no significant difference in scores between groups. Further research with increased sample size is needed to make strong conclusions about SSEPT for athletes.

IMPLICATIONS: SSEPT shows potential to be a reliable and clinic-friendly test of core endurance in athletes.