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Diving technique in young soccer goalkeepers: reproducibility of two new tests

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2 • TREINO DESPORTIVO/SPORT TRAINING

DIVING TECHNIQUE IN YOUNG SOCCER
GOALKEEPERS – REPRODUCIBILITY
OF TWO NEW TESTS

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INTRODUCTION

The Angular Sprint Diving Test (ASDT) and the Shuffle Sprint Diving Test (SSDT) were developed to assess the diving technique in young soccer goalkeepers.

METHODS

Twenty-six volunteers (14.5 ± 2.52 years) were recruited to evaluate reproducibility of the proposed protocols. The ASDT requires goalkeepers to accelerate during 3-m and dive over a stationary ball after performing a change of direction in a total distance of 10-m. SSDT involves a lateral shuffle in a total distance of 12.55-m. Participants completed two main trails each separated by one week. The independent samples t-test was used to compare the means of trial 1 and 2 and both diving sides. Reproducibility was assessed using the technical error of measurement (TEM) and relative TEM. Reliability coefficient was also calculated (Mueller & Martorell, 1988). The Bland-Altman (1986) procedures were conducted to determine limits of agreement (LOA) between trial 1 and trial 2.

RESULTS

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No differences were found between trials or diving sides ($p > 0.05$). Test-retest results for total time in ASDT are quite similar when performed to right (TEM = 0.09; %TEM = 4.18; $R = 0.90$; LOA = -0.16 to 0.28) and left sides (TEM = 0.09; %TEM = 4.37; $R = 0.89$; LOA = -0.29 to 0.23). Results in split 1, correspondent to the first 3-m, noted a greater susceptibility to diving side (right: TEM = 0.05; $R = 0.75$; LOA = -0.18 to 0.11; left: TEM = 0.05; $R = 0.87$; LOA = -0.14 to 0.13). Accordingly, within-subject variance was 6.15% and 5.61%. Replicate measures for SSDT_{right} (TEM = 0.19; $R = 0.90$; LOA = -0.24 to 0.58) and SSDT_{left} (TEM = 0.20; $R = 0.88$; LOA = -0.47 to 0.61) indicated a variance of 3.97 and 4.16, respectively.

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DISCUSSION

The present data demonstrate that the ASDT and SSDT are reproducible, particularly for the total time performance. Future research should focus on validation of designed protocols.

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