Reliability and Concurrent Validation of TRAZER® to 3D Motion Capture
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BACKGROUND AND PURPOSE

Efficient neural processing of visuospatial and proprioceptive input appears to be crucial for avoidance of sport injury. Clinical tests are needed to identify deficiencies found by advanced neurimaging and electrophysiological tests. Virtual reality visual stimuli with body motion tracking may provide an affordable means to acquire relevant data. Concurrent validity of TRAZER® single-camera data with 3D motion capture system data and to assess test-retest reliability of its whole-body reactive agility (WIRA) metrics

RESULTS

The purposes of this study were to assess concurrent validity of TRAZER® single-camera data with 3D motion capture. Two cohorts of healthy college-aged individuals were recruited to assess validity and reliability of TRAZER® metrics. The clinical relevance of the study is to provide objective and quantitative indicators of performance that can be used in the clinical setting to assess the effectiveness of rehabilitation and training programs. The current study extends previous investigations by evaluating the reliability and concurrent validity of TRAZER® to 3D motion capture data. The study findings suggest that TRAZER® measures are reliable and valid for assessing dynamic performance metrics.

METHODS

Table 1 Mean (±SD) Days 1-2-3

Table 2 Mean (±SD) Days 1-2-3

Table 3 Mean (±SD) Days 1-2-3

Table 4 Mean (±SD) Days 1-2-3

Table 5 Mean (±SD) Days 1-2-3

Table 6 Mean (±SD) Days 1-2-3

Table 7 Mean (±SD) Days 1-2-3

REFERENCES


CLINICAL RELEVANCE

Lack of strong concurrent validity between measures from different systems does not adversely affect the clinical utility of repeated TRAZER® measures for documentation of change in an individual’s performance capabilities.

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7