INTISARI

Latar belakang: Performa olahraga adalah parameter untuk mengukur kualitas atlet berdasarkan karakteristik teknis, taktis, dan fisiologis. *Functional Movement Screen* (FMS) sebagai alat ukur pada karakteristik fisiologis dimodifikasi teknik pengukuranya dengan bantuan *softwere Kinovea*. Modifikasi (mFMS) dilakukan karena pengukuran standar yang diberikan hanya berdasarkan pada perspektif penglihatan mata.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan antara karakteristik fisiologis (mFMS) dengan karakteristik teknik dan taktis pada atlet *sprinter* 100meter serta menganalisa aspek biomekanika melalui bantuan *softwere Kinovea.*

Metode: Empat puluh atlet (laki-laki: 27, perempuan: 13) lari 100meter yang berumur 17-25 tahun dipilih berdasarkan standar olimpiade dan diperoleh dari atlet yang memenuhi kriteria inklusi dan eksklusi. Seluruh atlet melakukan penilaian performa berdasarkan karakteristik performa. Pada karakteristik teknik dan taktis, atlet diminta untuk berlari sejauh 100meter, kemudian peneliti mengukur perolehan waktu dan melakukan analisa biomekanika dengan bantuan *softwere Kinovea* untuk mengukur sudut gerak gaya berlari. Pada karakteristik fisiologis, peneliti melakukan pengukuran berdasarkan kacamata fungsional (mFMS). Seluruh penilaian performa kemudian di persentasekan (%) hingga performa atlet dapat dinilai secara normatif dan deskriptif. Uji statistik menggunakan *Spearman test*, dimana hasil menunjukan ada tidaknya korelasi antar karakteristik penilaian performa.

Hasil: Modifikasi *Functional Movement Screening* (mFMS) sebagai alat ukur pada karakteristik fisiologis digunakan sebagai komponen utama dalam uji korelasi menggunakan *Spearman test*. Hasil uji korelasi antara karakteristik fisiologis dengan karakteristik teknik (p=0,275) menunjukan tidak ada hubungan antar karakteristik performa. Analisa biomekanika melalui bantuan *softwere Kinovea* dapat digunakan untuk mengukur sudut yang dikaji berdasarkan kategori jenis kelamin, umur, dan indeks masa tubuh.

Kesimpulan: Karakteristik fisiologis tidak menunjukan adanya hubungan dengan karakteristik teknik namun hasil penelitian dapat dikaji melalui analisa biomekanika.

Kata kunci: Modifikasi *Functional Movement Screening* (mFMS), analisa biomekanika, karakteristik dan penilaian performa.

ABSTRACT

Background: Sports performance is a parameter to measure the quality of athletes based on technical, tactical, and physiological characteristics. Functional Movement Screen (FMS) as a measurement tool on physiological characteristics was modified with the help of Kinovea software. Modification (mFMS) is done because standard measurements are given only based on the perspective of eye sight.

Objectives: This study aims to determine the relationship between physiological characteristics (mFMS) with technical and tactical characteristics in 100-meter sprinter athletes and analyze biomechanical aspects through the help of Kinovea software.

Methods: Forty 100-meter sprint athletes (aged 17-25 years) were selected based on Olympic standards and obtained from athletes who met the inclusion and exclusion criteria. All athletes had their performance assessed based on performance characteristics. In technical and tactical characteristics, athletes were asked to run 100meters, then researchers measured the time gain and conducted biomechanical analysis with the help of Kinovea software to measure the angle of motion of the running style. In physiological characteristics, researchers take measurements based on functional glasses (mFMS). All performance assessments are then percented (%) so that athlete performance can be assessed normatively and descriptively. Statistical tests using the Spearman test, where the results show whether there is a correlation between performance assessment characteristics.

Results: Modified Functional Movement Screening (mFMS) as a measurement tool on physiolog Modified Functional Movement Screening (mFMS) as a measurement tool on physiological characteristics was used as the main component in the correlation test using Spearman test. The results of the correlation test between physiological characteristics and technical characteristics ($p=0.275$) showed no relationship between performance characteristics. Biomechanical analysis with the help of Kinovea software can be used to measure the angles studied based on the categories of gender, age, and body mass index.

Conclusion: Physiological characteristics showed no relationship with technical characteristics but the results can be studied through biomechanical analysis.

Keywords: Modified Functional Movement screen (mFMS), biomechanical analysis, characteristics and performance assessment.