

PRODUCT

Novel eSports athlete evaluation for performance optimization and injury prevention

INDICATIONS

Performance analysis of eSport athletes, assessments related to reaction time, visual coordination, dual task activity accuracy, and neurocognitive processing

VALUE PROPOSITION

- First in class comprehensive performance evaluation for eSports athletes
- Provides quantitative data and usable metrics to identify performance deficits / areas for improvement
- Leverages previously validated normative data sets using an existing in-house software platform

DEVELOPMENT STAGE

Software and hardware systems developed, digital evaluation platform in development

PUBLICATIONS

Emara, Ahmed K et al. "Gamer's Health Guide: Optimizing Performance, Recognizing Hazards, and Promoting Wellness in Esports." [Current sports medicine reports](#) vol. 19,12 (2020): 537-545.

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eSports Athlete Performance Evaluation Application

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OPPORTUNITY

Electronic sports (eSports), or competitive video gaming, is a rapidly growing industry and cultural phenomenon. Like many traditional sports activities, daily time commitment varies greatly with the average professional eSports athlete spending between 5.5 – 10 hours per day gaming. This intensive training regiment can present many health-related challenges for eSports athletes and eSports organizations hoping to optimize performance and mitigate risk for injury. Commonly cited injuries include eye strain, back pain, headache, neck stiffness, and wrist pain. These injuries along with other ergonomic / neurocognitive challenges can drastically impede performance and have serious consequences regarding the long-term occupational well-being of eSports athletes.

At present, there is a severe unmet need in innovative health technologies that enable eSports organizations to objectively assess key performance metrics among their athletes. As a rapidly developing billion-dollar international industry, eSports presents a tremendous opportunity for the development and utilization of athlete assessment applications that are modeled after those used in traditional sports activities.

SOLUTION

We have developed a novel athlete performance evaluation application that is uniquely suited to analyze key performance indicators in eSports athletes. Our model includes game-based evaluations of reaction time (impulse control), visual response time to stimulus, dual task activity accuracy, pattern recognition, neurocognitive processing speed, and coordination. Together, these assessments provide a comprehensive profile of eSport athlete performance that may be used to optimize neuro-motor capabilities, objectively compare athlete performance, and provide enhanced consistency for eSport organization recruitment and athlete management. Additionally, this performance assessment model can be applied to eSports teams across a wide range of age groups including high school, collegiate, and professional eSports organizations.

The development of this performance evaluation model offers a first-in-class opportunity to objectively evaluate and optimize eSport athlete performance as well as provides a basic framework for an improved understanding of the occupational health of these athletes.